Investing for Impact: Finance and Farming in the Southern Highlands of Tanzania

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Author's Declaration

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except where specifically indicated in the text. No substantial part of the dissertation has already been submitted, or is being concurrently submitted for another degree, and the text does not exceed 80,000 words.

Investing for Impact: Finance and Farming in the Southern Highlands of Tanzania

African agriculture has attracted increased global policy attention over the last 10 years due to concerns over both food security and economic growth. In this context, social impact investing (SII)—where investors use financial models to achieve positive social impacts as well as financial returns—is presented as a viable means of financing agricultural development in the context of reduced public funding

This thesis is concerned with how SII (and its understandings, assumptions, and models of agricultural development) interact with smallholder farming in Tanzania. I unpack how the concept of SII takes shape, how it is translated into the Tanzanian context, and how it interacts with farmer livelihoods through a case study of Cheetah Development in Lower Kilolo District.

I take a political ecology approach drawing mainly on qualitative methods. The concept of assemblages is employed to investigate how diverse actors enter into relationships, how those relationships hold together, and how they fall apart. I focus on three key analytical themes: power (discursive, disciplinary, and institutional), moral economies, and the role of socio-material entities.

My findings show that SII is being driven by the pursuit for new profit frontiers and concerns over business risks, and also by a belief that a more ethical capitalist economy can be built. This has resulted in a narrative of 'Africa rising'. How exactly 'social impact' is being defined and the motivations for pursuing it, however, differ widely within SII.

To investigate how agricultural SII is translated in Tanzania I focus on Cheetah Development, an American social impact investor that provides agricultural inputs on credit to smallholder farmers and attempts to involve them in new maize value chains. Cheetah's model identifies existing maize value chains centred around middlemen as features of an immoral capitalism. It also views smallholders as not only lacking market access and inputs, but also lacking in business-orientated mindsets. The Cheetah model builds various mechanisms to discipline farmers and render them bankable.

Through examining farmer livelihoods, I find that farmers conduct diverse livelihood activities, and maize plays a variety of roles in village life. Farmer livelihoods are underpinned by a moral economy involving flexible relations of borrowing and lending. I conclude that assumptions of ethical capitalism embedded in the Cheetah model clash with farmer livelihoods and their conceptions of just socio-economic relationships.

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Abbreviations

ANT	Actor-network theory
AVCA	African Private Equity and Venture Capital Association
BRAC	Building Resources Across Communities
CAN	Calcium ammonium nitrate
CDC	Commonwealth Development Corporation (formerly)
CEO	Chief executive officer
DAP	Diammonium phosphate
DFI	Development finance institution
DFID	Department of International Development, UK
ESG	Environment, society, governance
FAO	Food and Agriculture Organisation of the United Nations
GDP	Growth domestic product
GE	Genetic engineering
GIIN	Global Impact Investing Network
GIIRS	Global Impact Investment Ratings System
IMF	International Monetary Fund
IOP	Ilula Orphan Program
IRIS	Impact Reporting and Investment Standards
MuCoBa	Mufindi Community Bank
MVIWATA	Mtandao wa Vikundi vya Wakulima Tanzania – Network of Farmers Groups in Tanzania
NGO	Non-governmental organisation
NGR	New green revolution
NFRA	National Food Reserve Agency, Tanzania
NPK	Nitrogen, phosphorus, and potassium
SAGCOT	Southern Agricultural Growth Corridor of Tanzania
SII	Social impact investing
SME	Small and medium sized enterprises
SSA	Sub-Saharan Africa
TANU	Tanganyika African National Union
TSh	Tanzanian shilling
UK	United Kingdom
URT	United Republic of Tanzania
US	United States

USAID	United States Agency for International Development
USD	United States Dollar
VC	Venture capital
VICOBA	Village Community Bank
1AF	One Acre Fund

1. Agricultural development, finance, and farmers

'Impact investing has the potential to unlock significant sums of private investment capital to complement public resources and philanthropy in addressing pressing global challenges.'

Global Impact Investing Network

GRAIN (non-profit advocacy group)

Figure 1.1 Contrasting perspectives on impact investing.[1]

This thesis is concerned with agricultural development in Africa, and how it has been imagined through social impact investing (SII). SII involves borrowing financial models and motivations, and applying them with the explicit intention to generate positive social impacts as well as financial returns. I explore how SII (and its understandings, assumptions, and models of agricultural development) interacts with smallholder farming in the Lower Kilolo District of Tanzania. I unpack how the idea of SII takes shape, how it is translated into the Tanzanian context, and how it touches down in Lower Kilolo. To do this, I look at a case study of social impact investor Cheetah Development, a US organisation that aims to boost commercial maize farming and build value chains

[1] Top taken from: https://thegiin.org/. Bottom take from: https://www.grain.org/article/entries/5294-socially-responsible-farmland-investment-a-growing-trap

by providing agricultural inputs on credit. Farmers then repay their loans in maize, which Cheetah sells to a market buyer.

Going beyond the polarised positions on SII presented in Figure 1.1. involves examining multi-scalar and multi-sited processes and flows involving a variety of actors. I therefore take a political ecology approach, drawing on the concept of assemblages, to study how relationships between disparate actors form, how those relationships hold together, and how they are disrupted and fall apart. Based on empirical research with smallholder farmers, social impact investors, and policy makers in Tanzania, the UK, and the US, I explore assumptions different actors hold of each other and the fragile associations between them.

This introduction does three things. Firstly, I sketch out the key issues examined in this thesis, as well as how they have been analysed by political ecologists. Chapters 2 and 3 explore these topics in more depth. Secondly, I introduce my research objectives, before providing a chapter guide to the rest of the thesis.

1.1. Development, agriculture, and smallholder farming in sub-Saharan Africa

1.1.1. Development

'Development' is a highly contested term that broadly refers to processes of social, economic, and political change (immanent development), and interventions designed to achieve this (intentional development). Although its roots can be traced back to the nineteenth century as a means to ameliorate the social disorder resulting from 'progress' in the form of industrialisation, it was during the twentieth century that specific institutions were created with responsibility for coordinating and financing international development efforts (Cowen & Shenton 1996).

During the late colonial period, the term was adopted to refer to the 'white man's burden', and the transformation of the 'colonial' world into the 'developing' world. Intentional development as planned interventions and policies by a variety of institutions in the Global South emerged after the Great Depression in the 1930s, and in particular after World War Two. During this period, attention was directed towards the formation of nation-states, national economic growth and industrialisation, and agricultural commercialisation and productivity increase (see Section 1.1.2.). From the 1980s, development efforts shifted to implementing economic and political liberalisation and global integration through structural adjustment and conditionalities on aid and loans. The development sector has become increasingly complex in the new millennium, with the rise of social movements

pushing back against the globalisation of neoliberal policies, and the articulation of alternatives to mainstream development discourses (McMichael 2008). Drivers of the development apparatus now include a wide variety of institutions, including national states, international organisations and financial institutions, non-governmental organisations (NGOs), social movements, and corporations. Over time, the role of the intended beneficiaries has also shifted in this development discourse, as will be discussed in Section 1.1.4. in relation to smallholder farmers.

Development has been understood in a variety of ways within geographical thought. These include Marxist analyses of class struggle and imperialism, for example through dependency theory that explains underdevelopment as a consequence of the relationship between the Global North and Global South (Frank 1967); development as a neoliberal project, particularly from the 1980s (Craig & Porter 2006); and development as an apparatus of governmentality and discipline (Li 2007b). There is also literature on why development interventions often fail to achieve their desired outcomes, and instead produce unintended consequences (Scott 1998; Moyo 2009). From the 1960s and 1970s, theorists influenced by poststructuralism, feminism, and postcolonialism turned to critiquing the notion of 'development' itself as a hegemonic social construct and power relation aimed at mapping and 'making' underdevelopment (Crush 1995). Post-development scholars ask whether there are multiple possible development trajectories that circumvent the institutional structures, 'experts', and anti-political and technocratic diagnoses and solutions of intentional development (Ferguson 1990; Escobar 1995).

With these debates in mind, I refer to intentional agricultural development as a specific set of interventions by states, donors, NGOs, and corporations that aim to transform agricultural production based on a particular vision of problems, causes, and solutions: 'this is the power of development: the power to transform old worlds, the power to imagine new ones' (Crush 1995, p.2). Studying agricultural development entails analysing how rural livelihoods are understood, packaged, and reshaped through particular strategies and power relations, and the uneven and often unexpected outcomes of these strategies. The rest of this section introduces major debates over agricultural development, with a particular focus on sub-Saharan Africa (SSA).

1.1.2. Agricultural development and modernisation

From the 1960s, the debate over agricultural development in the Global South was framed by development economists in terms of 'modernisation', and the 'stages of growth' from largely agricultural societies to 'maturity' and mass consumerism (Rostow 1960). Small-scale farming would inevitably be replaced by more 'advanced' capitalist farms based on land consolidation, vertically integrated value chains, and the uptake of 'modern' methods and technologies in order to increase

agricultural productivity (Brookfield 2008). In modernisation narratives, profit-maximisation and market optimisation are granted primary importance. This creates a dualistic value judgement of rural people between those who are backward and conservative in clinging to traditional cultivation and subsistence farming, and those who are 'enterprising' and 'modernising'. Modernisation narratives have received an added sense of urgency from Malthusian accounts of the 'population problem', and the need to increase food production to feed the growing global population and avoid 'positive checks' like war and disease. Another key influence on this modernisation perspective is Hardin's (1968) 'tragedy of the commons' thesis, which posits that mismanagement on common property is a major driver of environmental degradation. This provides further rationale for enclosure, privatisation, and the imposition of external management.

Modernisation narratives promote an active response to countries and societies that appear to be failing to conform to this evolutionary model. These narratives have found traction in both socialist-orientated (peasant collectivisation in 1960s and 1970s) and capitalist contexts (especially with the rise of neoliberalism from the 1980s), and have infiltrated the approaches of national governments as well as international agencies, donors, and NGOs. The specific kinds of technocratic policies that these ideas have prompted (for example green revolution policies of the 1950s–1970s) are discussed in Chapter 2.

1.1.3. Sub-Saharan African agriculture and capitalism

Agriculture has arguably continued to present barriers to the penetration of capitalism (Lewontin, 1998; Kloppenburg 2004). These barriers lie in the control retained by farmers over choices in agriculture, for example over what to plant, how much to plant, how to cultivate, and the inputs used. These choices are necessarily influenced and constrained by local environmental, climatic, and social factors. Choice over the agricultural inputs used is especially problematic, as farmers can choose to produce their own inputs, especially replanting seed and using compost or manure, thus limiting opportunities for the expansion of capitalist relations. Despite these apparent incompatibilities, capitalist mechanisms and motivations have shaped agricultural motivations and practices, with varying consequences for smallholder farmers.

Farmers have for a long time engaged in speculation and hedging on the prices of agricultural commodities, for example the seller may agree in advance to deliver to a buyer a specific quantity of a commodity for a specific price at a specific time (Isakson 2013). This allows for sellers to hedge against prices decreases, and buyers to hedge against price increases, thereby providing risk-mitigation and security to both parties. From the mid-1800s these exchanges began to be standardised

through agricultural commodity futures markets, for example initiated by the Chicago Board of Trade in 1864 (Clapp and Helleiner 2012). These markets, however, also provide opportunities for speculators to take up futures contracts with no interest in the physical crop, but instead in gambling on price changes and shifting risk in investment portfolios. The risks of speculative investment have been recognised since the early twentieth century, and agricultural futures markets in the US, for example, were tightly regulated through the 1922 Grain Futures Act that outlawed price manipulation (Clapp 2014). Regulations, however, were relaxed in the 1980s and 1990s under the prevailing neoliberal ideology and pressures from banks wishing to hedge their own financial risks by engaging in commodity markets (Clapp 2014; Ghosh 2010). Since then, a range of increasingly complex agricultural derivatives markets—which involves speculation and hedging on contracts deriving value from an underlying commodity or bundle of commodities—have increased the complexity of the penetration of agriculture by financial actors, motivations, and mechanisms (Bregar-Bush 2012, Russi 2013).

In the new millennium, the relationship between agriculture and financial actors, models, and motivations has intensified (explored in Chapter 5). Agricultural development is increasingly being presented as a solution to interrelated global and domestic challenges. These include feeding the expected nine billion global population by 2050 under conditions of climate change, urbanisation, and an expanding global middle class; alleviating rural poverty and boosting national economic development; meeting energy needs through biofuel production; and providing new profit-orientated investment opportunities. SSA is often portrayed as the place where the largest productivity gains are expected to occur, based on yield gaps, under-utilised land and water resources, and the limited impacts of the first green revolution (1950s–1970s) compared with much of Asia and Latin America. This has crystallised through the narrative of a new green revolution (NGR) for Africa (Rockefeller Foundation 2006; de Schutter & Vanloqueren 2011; Conway 1997; Dano 2007).

Emphasis on African agricultural development is occurring in a context of reduced public funding and reductions to overseas development aid, and in parallel the narrative that agricultural development in Africa is dependent on drawing in external or alternative sources of finance. This has led to the involvement of an expanding range of actors citing motivations based on combinations of food and energy security as well as financial profits. Attention has been drawn to large-scale land grabs by foreign and domestic actors, as well as the promotion of genetically engineered crops that do not germinate when replanted (Kloppenburg 2004; Zoomer 2010; Borras and Franco 2012; Daniel 2012). These processes have been critically analysed as enabling the deeper penetration of capitalism into agriculture, and the associated risks of accumulation by dispossession of smallholder farmers.

In the context of reduced public funding, and concerns over the predatory and speculative nature of agricultural interventions based on financial models and motivations, a new narrative of agricultural development is emerging: social impact investing. In this thesis, I explore how social impact investors in Tanzanian agriculture attempt to align the motivations, values, temporalities, and materialities of capitalism and agriculture to generate both positive social impacts and financial profits.

1.1.4. Smallholder farming

Smallholder farmers are central actors in African agricultural development narratives, and therefore also in this thesis. The widely accepted definition of smallholder farmers is people who rely mainly on household labour, cultivate primarily for subsistence, and follow a non-profit maximising logic with partial engagement in input and output markets (Ellis 1993; Netting 1993; Shanin 1973; Mortimore 1998; Wolf 1966; Scott 1976). Bryceson et al. (2000) identify how the term 'smallholders' grew in popularity from the 1980s to refer to individualised and rational economic agents aiming to increase participation in agricultural commodity markets. The term 'peasant' is also used, but it has a value-laden past as either a derogatory term or to refer to a politicised class. While the terms are used interchangeably in the literature—and so both appear in this thesis—I will use the term smallholder farmer. The definition of a smallholder farmer has remained purposefully vague to take into account the local expressions and diversity of livelihoods. It provides a springboard for a variety of theorisations that examine the role of smallholder farmers in capitalist relations that will be explored in Chapter 3.

Smallholder farmers have been framed in multiple ways within agricultural development narratives. Handy (2009) identifies a long history of blaming smallholder farmers for stifling agricultural development, due to their supposedly innate backwardness and ignorance. This has prompted efforts to displace smallholder farmers from the land to create wage labour for plantation agriculture and industrialisation. Others, however, depict them as entrepreneurs who can be supported to boost productivity through value chain integration (World Bank 2008). Some social impact investors go one step further by proposing that smallholder farmers themselves can be rendered 'investable' to become the focus for generating financial profits as well as social returns. This framing of smallholder farmers as 'investable' in the context of agricultural development interventions is a key issue in this thesis.

1.2. The political ecology of agricultural development and smallholder farming

Despite their portrayal in modernisation theory as backward, inefficient, and 'doomed by the forces of modernization and industrialization… peasants have confounded western social science by their enduring presence' (Bryceson et al. 2000, p.6). With this in mind, political ecology scholars have analysed the politicised role of smallholder farmers in agri-food relations, and have raised key questions about why farmers do what they do and how best it can be supported. Political ecology can broadly be defined as a 'community of practice' studying issues of power, access, control, and marginalisation in human-environment relations (Robbins 2004). Early political ecology scholars combined structural Marxist political economy with ecologically rooted social science. The likes of Watts (1983), Scott (1976), Chambers (1983), and Richards (1985) served to disrupt depictions of smallholder farmers as ignorant, backward, and conservative by drawing attention to indigenous knowledge and innovation and the rationales behind forms of resistance. Importantly, political ecologists exposed the role of external forces—for example colonial and national policies and the global economic system—in interrelated processes of environmental degradation and marginalisation. These issues were often understood through a 'chain of explanation' approach by which human-environment relations at the local level were analysed through looking for explanatory factors at national, regional, and global levels (Blaikie & Brookfield 1987).

Early forms of political ecology, and in particular the 'chain of explanation' approach, have been critiqued for imposing hierarchical and abstract causal connections between the local and the global, and for relying on pre-given socio-spatial containers like 'the state', 'the household', and 'capitalism' (Rangan & Kull 2008; Watts & Scales 2015; Neumann 2009). In response, political ecology has broadened to incorporate a range of perspectives, for example drawing on the narrative turn (Leach & Mearns 1996; Peet & Watts 1996), feminist political ecologies (Nightingale 2006; Rocheleau et al. 1996), and post-human, network, and assemblage approaches (Robbins & Marks 2009; Swyngedouw 1999). Chapter 3 provides a deeper discussion of political ecology, its roots in political economy, and recent elaborations.

Ultimately, Ouma (2017) writes that we 'need to ask how actors in Africa have lived with and shaped capitalist modernity, and how they have carved out distinct local moral and material spaces out of this'. This implies that the way in which capitalist motivations, relationships, and implications play out in particular contexts cannot be assumed and must be made the subject of empirical study. In response, I take a political ecology approach, drawing on the concept of assemblages, for an empirical analysis of how heterogeneous actors involved in SII interact in Tanzania, hold together (albeit

temporarily), are disrupted, and fall apart or are reassembled. Drawing on the concept of assemblages guides the research agenda by encouraging the asking of 'how' questions, as well as sensitivity to the relational nature of interactions that are emergent and often fragile (Muller 2015; Muller & Schurr 2016). This is important in the context of increasingly globalised, financialised, and distanced agri-food relations.

1.3. Research objectives: why study SII in African agriculture?

There are two major rationales for an empirical study of SII in African agriculture. The first is that private sector involvement (for example through SII) is being framed as an important means of financing agricultural development, and thus its underlying assumptions, mechanisms, and outcomes merit investigation. The second is that while SII has generated much hype, there is a lack of empirical information about how different SII actors frame African agricultural development and smallholder farmers, and how SII models and their underlying moral economies unfold in particular contexts. This thesis therefore investigates how the idea of SII emerges, how that idea travels and is translated in the Tanzanian context by different actors, how a particular social impact investor aims to integrate smallholder farmers into agricultural value chains, and what happens when this model interacts with farmer livelihoods.

I explore the following research objectives (sub-questions detailed in Chapter 3):

A. To investigate the factors driving SII in African agriculture, and the actors and motivations involved.
B. To explore how SII is translated in the Tanzanian context by different actors, focusing on the case study of Cheetah Development.
C. To understand the livelihoods of smallholder farmers in Lower Kilolo District, including the socio-economic, political, and cultural relations underlying those livelihood activities.
D. To examine what happens when the SII model of Cheetah Development meets the messy realities of farmer livelihoods in Lower Kilolo.

The research is situated in Lower Kilolo District in the Iringa Region of Tanzania. Tanzania is an apt location for a study of how SII is unfolding in African agriculture due to the country's long history of agricultural development interventions and its changing approach to foreign investment. From independence in 1961, Tanzania has swung from embracing foreign investors, to inward-looking African socialism, and back again. This has culminated in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) initiative to encourage foreign investment in smallholder agricultural

development. Iringa Region is a productive area for maize farming and is at the centre of the SAGCOT. It has therefore attracted the attention of agricultural social impact investors and is the location of a variety of SII projects. Further details about the research site are provided in Chapter 2.

Taking a case study approach enables me to situate how financial models, motivations, and actors interact with farmer livelihoods in a particular context, and how this can lead to unexpected implications. This serves to complicate the narrative of SII as being the best and only way to construct just socio-economic relations through agricultural development.

1.4. Structure of the thesis

In Chapter 2, I contextualise SII in African agriculture by reviewing the literature on colonial agricultural interventions, the first green revolution (1950s–1970s), and the new green revolution (2000s–). I then shift focus to Tanzania to explore why it makes an apt location to study how agricultural SII is unfolding. I discuss experimentation with agricultural development approaches and shifting perspectives on foreign investment from independence in 1961 to the present day. Finally, the chapter details the reasons behind the choices of Iringa Region, Lower Kilolo District, and the villages of Lundamartwe, Kitelewasi, Vitono, and Kipaduka as research sites.

In Chapter 3, I review major theoretical lenses used to understand agrarian change. I detail classical political economy debates, before discussing how political ecologists have overcome some critiques of these approaches. I explore some recent elaborations on early political ecology, for example drawing on the narrative turn, feminist geographies, and post-human, network, and assemblage geographies. Finally, I outline my theoretical framework of a political ecology approach drawing on the concept of assemblages. Within this approach, I employ three analytical themes: power (discursive, disciplinary, and institutional), culture through the study of moral economies, and the role of material entities in assembling, stabilising, transforming, and disrupting relationships.

In Chapter 4, I detail the mix of mainly qualitative methods used, including focus groups, interviews, participatory methods, and document analysis. These methods were conducted with a range of key informants including farmers, social impact investors, agricultural development organisations, and policy-makers in a variety of settings across Tanzania, the UK, the US, and using different channels such as Skype and phone as well as face-to-face. Finally, this chapter deals with some issues of translation and positionality.

Chapters 5, 6, 7, and 8 present the empirical research findings. In Chapter 5, I explore SII in African agriculture using data from industry documents and interviews with key informants. The proliferation and mainstreaming of SII is being driven by four factors: the pursuit of new profitability frontiers, recognition of business risks, a moral crisis amongst some investors, and a search within philanthropic circles for new financing models in a time of public funding cuts. SII is, however, a malleable concept, and it means different things to different actors in terms of motivations, end goals, the balance of social and financial impacts, and how 'social impact' is defined and understood. Finally, the chapter turns to how African agriculture is constructed as a site for investment. African agriculture is appealing to social impact investors for demographic, agro-ecological, political, and economic factors, as well as the potential to generate both local and global positive social impacts. This has resulted in a dual narrative of 'Africa rising' and Africa in need of 'help'. Enthusiasm for SII in African agriculture has, however, been tempered after experiences of failure and recognition of the various challenges it entails. This is resulting in uneven geographies of investment.

Chapter 6 shifts focus to explore how the idea of SII travels and is translated in the Tanzanian context. I unpack an assemblage of organisations that are united around building more ethical socio-economic relations in the agricultural sector, but who approach this in different ways. I focus on Cheetah Development as a key node through which smallholder farmers access finance and are incorporated into the SII assemblage. Cheetah understands the challenge of agricultural development in two ways. Firstly, they diagnose a 'lack of economy' in terms of unreliable value chains and exploitative middlemen, and consequently attempt to build more ethical capitalist relations. Secondly, they diagnose a lack of business mindset in smallholder farmers, and therefore employ discursive, disciplinary, and institutional power relations to change farmer behaviour and mindsets. This model is, however, underwritten by a set of assumptions about smallholder farmer livelihoods, and a prescriptive moral vision for the commercialisation of maize production.

In Chapter 7, I unpack farmer livelihoods in Lower Kilolo. Based on data from interviews, focus groups, participatory methods, and participant observation, I discuss diverse activities before focusing on the major livelihood stream of farming. Farmers cultivate a wide range of crops in both their gardens and farms, but the most important crop is maize. Maize plays a range of key roles in village life that relate to food and nutrition, spiritual relations, budgeting and saving, and income generation. Finally, I explore how farmer livelihoods are underpinned by a set of moral economic relations that include divisions of labour within the household and within the village, methods of spending and saving, spiritual relations, and borrowing and lending practices that are temporally and materially flexible.

The clashes between the Cheetah programme and farmer livelihoods are explored in Chapter 8. I examine how in the context of intermittent rainfall and a rat infestation in 2014–2015 the Cheetah assemblage fell apart. This was manifested in the widespread defaulting of participating farmers as a form of everyday resistance. The collapse of the Cheetah assemblage is attributed partly to avoidable issues of implementation that included allegations of corruption, opaque contracts, poor timing, and poor communication. It is also partly attributed to clashes between the moral economy embedded in the Cheetah model and that of the farmers. These clashes relate to temporal and material inflexibility, prescription versus entrepreneurship, and poor communication and distanced relationships with the banks. I explore how farmers attempted to negotiate and reassemble relationships by asking for loan repayments to be postponed to the following year. Cheetah, on the other hand, rigidly exerted institutional, disciplinary, and discursive power to enforce repayment and shift the burden of responsibility onto the farmers. These clashes highlight the underlying incompatibilities of Cheetah's financial model and farmer livelihoods in Lower Kilolo.

Chapter 9 concludes the thesis by summarising and synthesising the findings from the four empirical chapters. I discuss how my theoretical perspective encouraged me to ask certain questions and shaped the analysis in important ways. Some areas for future research are introduced, before a final concluding statement is made.

2. Intervening in smallholder agricultural development

2.1. Introduction

Since the colonial period, intervening in smallholder agricultural development has been used as a tool for controlling populations, shaping landscapes, and as a means of achieving national and global economic and political goals. While the motivations and actors driving agricultural development policies have changed over time, certain continuities can be identified relating to the framing of smallholder farming as being in need of modernisation through technocratic and scientific interventions to boost agricultural production.

The first half of the chapter explores approaches to agricultural development since the colonial period. I discuss the colonial roots of agricultural development that aimed to fuel industrialisation in Europe, as well as integrate the colonies into the international economy. These colonial agricultural policies often took the form of large-scale plantation style schemes, but also through the imposition of cash taxes and the introduction of new agricultural inputs and techniques. The colonial period also saw an expansion in knowledge of the landscapes and people in the colonies, and there was some recognition of the relevance of local agricultural knowledge and practices.

Moving forwards in time, I discuss the green revolution (1950s–1970s) that proposed technocratic and modernising solutions for agricultural development in the geopolitical context of the Cold War. Green revolution policies and programmes did boost agricultural productivity across parts of Asia and Latin America, but it was geographically uneven, and there is evidence for negative ecological and social impacts. I also explain a variety of reasons why the green revolution programmes largely failed in sub-Saharan Africa (SSA).

The chapter then examines the recent refocusing on agricultural development through the call for a new green revolution (NGR) in Africa in the context of concerns over feeding the growing global population, alleviating rural poverty, and boosting national economic growth. Although there are continuities in the conceptualisation of the problem, cause, and solution, there are new elements to the NGR in Africa. These include new technologies, new actors, and new debates over modes of organisation and the role of smallholder farmers. The NGR in Africa has faced criticism, particularly about the speculative and predatory role of some financial actors in agriculture. With this in mind, I introduce the concept of social impact investing (SII) that lies at the nexus of debates over how to finance the NGR for Africa, and concerns over the speculative and predatory role of some financial

actors. I explore the history of the concept, and introduce some key questions that it poses for agricultural development.

The second half of the chapter illustrates why Tanzania is an apt location for a study of how SII is unfolding in African agriculture. I explore the intersections between approaches to agricultural development and foreign investment policy since independence in 1961, through the '*ujamaa* decade' of 1967–1977, to the post–1980s economic liberalisation. Finally, I describe the socio-economic, environmental, political, and economic context of the research site of Iringa Region, and in particular Lower Kilolo District.

2.2. Colonial roots of agricultural development

The combination of industrialisation in Europe and enhanced trade (due to a world price for staple grains from the 1870s) had profound consequences in colonies in the Global South. This period saw interventions in agriculture through a combination of land grabbing for plantation style production and the commodification of staple foods. These colonial agricultural interventions were often legitimised by paternalistic and racialised narratives of the 'white man's burden' and the 'noble savage' (Handy 2009). Colonial agricultural interventions involved population resettlement, vegetation clearance, and the establishment of large-scale plantations based on 'blind faith' in mechanised agriculture (Scott 1998). Many of these projects were ultimately a failure, for instance the groundnut schemes in Tanzania that are discussed in Section 2.5.1. In northern Nigeria, Watts (1983) describes the 'silent violence' caused by pressures of cash taxes that forced farmers to sell their crops rather than keep them for food. In many parts of the world, this 'silent violence' also coincided with El Nino famines leading to what has been called the 'Late Victorian Holocausts' (Davis 2002; Watts 1983). This resulted in the formation of a class of farmers dependent on export markets and integrated into international capitalist commodity chains (Friedmann 2004). According to Davis (2002, p.26), 'Londoners were in fact eating India's bread'.

Colonial interventions in African agriculture, however, did not always involve top-down and one-way flows. Tilley (2011) explores the work of the African Research Survey that ran from 1929. This survey was undeniably an attempt to employ geographical, anthropological, and ecological science to understand and survey African natural resources and people to enhance colonial governance, bring about modernisation, and entrench integration into the colonial economy. However, it also involved debates among colonial advisors over site specificity, and to a certain extent local knowledge. By the 1950s, a number of field scientists had shown that many local agricultural techniques employed in Africa were locally appropriate, innovative, productive, and 'could hardly be bettered by science'

(Worthington (1938) quoted in Tilley 2011, p.28). This perspective was partly influenced by a shift from understanding African environments as inherently fertile, to seeing them as fragile and preserved by local land managers. This case demonstrates early questions about what constitutes 'expertise', how knowledge travels, and how it is translated to fit a local context. These questions continue to be relevant today.

2.3. The first green revolution, 1950s–1970s.

A discussion of agricultural development policies and narratives relating to the first green revolution is important given that this thesis is situated within calls for the need for a 'new' green revolution for Africa. The first green revolution is the name given to a technocratic approach that dominated after the Second World War until the 1970s, during which agricultural development in the Global South was imbued with political urgency (Friedmann & McMichael 1989; McMichael 2009b). This period was characterised by United States (US) hegemony and a model of capital-intensive national agriculture that emerged from the 1930s dustbowl crisis and was based on 'green revolution' technologies: synthetic fertilisers (developed using wartime nitrogen production technology), high yielding seed varieties (HYVs), mechanisation, and irrigation (Mazoyer & Roudart 2006). These technologies deepened the links between the energy and agricultural sectors, and increased agricultural dependence on fossil fuels resulting in so-called 'petro-farming' (Cleaver 1977; Walker 2005).

From the 1950s, agricultural development in the Global South was propelled to the top of the international agenda as an arena in which the Cold War conflict between the US and the Union of Soviet Socialist Republics (USSR) was performed. During this period, the humanitarian narrative of 'food security became the pretext for turning food into a weapon of power' (McMichael 2013a, p.32). This gave rise to the explicitly socio-political Cold War narrative of 'a hungry peasant is a revolutionary peasant', and subsequent efforts to boost global food distribution and production: a 'green revolution' rather than a red revolution. In the words of Cleaver (1982, p.269), 'food was clearly recognised as a political weapon in the efforts to thwart peasant revolution in many places… from its beginning the development of the green revolution grains constituted mobilising science and technology in the service of counter-revolution.' This materialised in two major ways. Firstly, the surplus 'cheap food' that resulted from the US model of capital-intensive national agriculture was translated into cheap food internationally through subsidised food exports under Public Law 480 from 1954 (Carolan 2011). This was framed as a development project aiming to fuel industrialisation in the 'Third World', but it also served to pacify the urban labour force in the 'hot' Cold War perimeter, to create a 'new axis between the USA and the Third World', and to stabilise the American agricultural

sector by creating large new markets (McMichael 2009b; Friedmann 1992, p.372). While this was welcomed by some governments in the Global South, it also entrenched dependence on food imports (Bernstein 2015).

Secondly, this period saw the exportation of the US agricultural 'green revolution' model itself. Advances in the breeding of, in particular, dwarf HYV varieties of wheat and rice led to the creation of a 'silver bullet' package of technologies (Yapa 1993; Dalrymple 1985; Kloppenburg 2004). These technology packages of HYVs and synthetic fertilisers were developed and disseminated by philanthropic organisations, such as the Ford and Rockefeller Foundations, in partnership with local governments that provided subsidy schemes (Paddock 1970). Local research stations were established, including the International Maize and Wheat Improvement Centre in Mexico and the International Rice Research Institute in the Philippines.

For many national governments, the green revolution technology package provided a means of asserting national food self-sufficiency in the post-colonial context (Seshia & Scoones 2003). The emphasis on synthetic fertilisers and HYVs also supported the growth of agri-businesses that entrenched agriculture as a sector ripe for capitalist expansion, and drew farmers further into international agricultural input and output networks (Friedmann 2004; Friedmann & McMichael 1989; Bernstein 2015). In this way, the green revolution supported the foreign policy of the US, which was dedicated to facilitating the expansion of markets for US multinational agri-business corporations (Cleaver 1972; McMichael 2013a). The narrative surrounding the first green revolution, therefore, somewhat paradoxically interwove philanthropic concerns, goals of national self-sufficiency, the US's Cold War strategy of containment, and its market-building ambitions.

Green revolution policies were linked to a rise in overall agricultural productivity: Sanchez (2010, p.299) reports that between 1960 and 2000 Asian and Latin American food production tripled. This means that in terms of producing more food, the green revolution did achieve its aim (Lipton 2007). Despite overall productivity increases, however, specific impacts were varied geographically, socially, and over time. A range of issues have been recognised within what was presented as a largely politically neutral and technocratic movement. Introduction of green revolution technologies was based on 'betting on the strong', which involved targeting technology packages and credit schemes towards so-called 'progressive farmers' who were deemed to have sufficient land, capital, and labour resources to eek out maximum productivity increases (Pearse 1980; Seshia & Scoones 2003; Chambers & Ghildyal 1985). The identification of 'progressive farmers' often occurred in contexts where social differentiations fell along ethnic, religious, linguistic, cultural, and caste/class lines, thus exacerbating pre-existing inequalities (Pearse 1980). In some areas, this led to the consolidation of land into large farms at the expense of smallholder farmers who became wage

labourers. In many contexts, the focus on 'progressive farmers' was not accompanied by industrialisation and job creation for those moving out of agriculture (Shanin 1974, p.190). For those who remained in agriculture, increased debt was another consequence, as farmers took out loans to cover the cost of the input packages (Altieri 2009; Pearse 1980). The debt burden was felt most keenly by farmers who possessed less land and fewer assets and savings to act as a buffer in times of hardship. Related impacts included rural to urban migration, expanding social polarisation, and lowered standards of living (Shiva 1992; Griffin 1979). Wertheim (1974, p.320) notes that:

> *'relying on progressive farming—a system I have called 'betting on the strong'—has not produced a strengthening of community ties and greater equality, but has led to a polarisation within the Asian villages, with the poor peasantry losing their lands and becoming the victims of 'modernisation' introduced from outside'.*

Evidence suggests that the green revolution also produced adverse environmental impacts in some areas, for example eutrophication of water sources, soil erosion, depletion of soil nutrients, and pest and crop disease infestations due to reduced genetic diversity and chemical-intensive mono-cropping (Shiva 1992; Cleaver 1972). Successful cultivation of HYVs was dependent on precise agro-ecological conditions, for example soil type and rainfall patterns, and they failed to produce a high yield if those conditions were not met.

The framing of these crops as 'high yielding' emphasised the overriding importance of the marketable element of the crop, and undermined the value of landrace varieties that had been selectively bred by farmers over thousands of years for their taste, appearance, and cultivation qualities under particular conditions (McCann 2005). The focus on cultivating certain crops due to their commercial potential also led some farmers to convert more of their farms to HYV grains at the expense of other crops, for example pulses, thus reducing farm biodiversity as well as nutritional diversity (McCann 2005). Carl Sauer, a major contemporary critic of green revolution policies, highlighted that 'the interest is directed away from subsistence or village agriculture to the needs of city and factory with the attendant emphasis on standardization and on yield… and on the commodities which the privileged fraction of the population can absorb' (Sauer, quoted in Patel 2013, p.9).

The first green revolution had much less impact in SSA than in Asia and Latin America. According to Dano (2007), while average fertiliser application rate tripled in South Asia from 1980/81–2000/01, it remained almost stagnant in SSA. Similarly, it is estimated that by 1998 HYVs were cultivated on 82% of arable land in Asia, while in SSA this figure was only 27% (Pingali 2012, p.12302). This is not to say that the green revolution bypassed Africa completely, but rather it failed to have widespread impact due to a variety of factors. For tropical crops like cassava and semi-arid crops like

sorghum and millet commonly grown for subsistence in SSA, there had been little pre-existing germplasm research, and so efforts to develop HYVs progressed more slowly (Evenson & Gollin 2003). Moreover, while the spread of green revolution technologies in many parts of Asia and Latin America were underpinned by subsidies and national research programmes, the politico-economic context in many SSA countries was less conducive to supporting this institutional infrastructure, having recently emerged from independence struggles. By the 1970s, major international green revolution actors were directly targeting African countries, for instance the Rockefeller and Ford Foundations established the International Institute of Tropical Agriculture in Nigeria in 1971 (Dano 2007). The one-size-fits-all approach of many of the resulting programmes, however, failed in the context of the diverse mosaic of ecological and socio-cultural microcosms that are found in SSA, and costs of purchasing the technology packages that were prohibitive for many smallholder farmers.

2.4. A new green revolution for Africa?

In the late 2000s, the global agri-food system was rocked by a financial crash and food prices hikes prompting food riots in 30 countries. By the end of 2007, food prices had risen by 75% from 2005, and world grain reserves were at only 54 days (Holt-Gimenez & Kenfield 2008, p.3). In agricultural development circles, this has culminated in calls for a 'new green revolution' (NGR) to develop new crop varieties and cultivation methods to boost global food productivity and nutritional improvements under conditions of climate change (Conway 1997; Rockefeller Foundation 2006; de Schutter & Vanloqueren 2011; Borlaug 2000). Additionally, agriculture is being framed as a solution to the energy crisis through the production of biofuel crops, as well as providing a means to alleviate rural poverty and boost national agricultural development. The major focus of the NGR has been on SSA, which is framed as not only having largely 'missed' the productivity increases from the first green revolution, but also as the location with the largest 'yield gap' where the greatest gains in agricultural productivity are to be achieved (Schnurr 2016; Glover 2014; Pradhan et al. 2015).

The extent to which the NGR is 'new' has been challenged. The underlying narrative is still based on the framing of food production as the problem, rather than food distribution, and under-producing smallholder farmers facing a population crisis are still identified as the cause. Both incarnations of the green revolution see the solution being the 'modernisation' of smallholder farming through the introduction of technical packages, 'modern' techniques, and integration into increasingly globalised agricultural value chains (Rosset 2006; Seshia & Scoones 2003; Dowd-Uribe 2016). There are, however, some novel aspects, and the NGR is not merely a replication of previous waves of agricultural development. These novel aspects include new technologies, new actors and motivations, and debates over forms of organisation and the role of smallholder farmers.

2.4.1. New technologies: genetic engineering

While the first green revolution was built on the back of HYVs, the NGR promotes the cultivation of seeds that have been genetically engineered (GE) in a laboratory to introduce genes for certain traits, for example drought tolerance, pest resistance, or nutritional qualities. As of May 2017, only four African countries officially allow the cultivation of GE crops (Burkina Faso, Egypt, Sudan, and South Africa). Elsewhere, their use is heavily circumscribed by strict liability regulations. Advocates argue that GE seeds present opportunities to develop locally appropriate varieties that meet nutritional and cultivation demands in particular contexts, as opposed to the one-size-fits-all policies of the first green revolution (Paarlburg 2008; Potrykus 2010; Borlaug 2000).

Critics, on the other hand, have highlighted that GE crop cultivation may result in many of the same problems that accompanied the earlier spread of HYVs: they demand precise agro-ecological conditions in order to grow, and often struggle if these conditions are not achieved; they may be more costly to cultivate due to the need for synthetic fertiliser to maximise yields, potentially leading to farmer indebtedness; and they may displace the cultivation of other food and cash crops that may be better suited to local socio-cultural and agro-ecological conditions (Dowd-Uribe 2014). There are also concerns over the environmental consequences of 'gene flow' between domesticated and wild crop varieties, and unexpected consequences for ecological systems (McAfee 2003; Holt-Gimenez & Altieri 2013; Rissler & Mellon 1996). Furthermore, GE seeds (and the farmers that grow them) are being integrated into agri-business value chains through, for example, the development of seed varieties that are sterile in the second generation and so require farmers to purchase new seeds each year (Kenya Small Farmers' Forum 2004; Kloppenburg 2004; McAfee 2003). GE seeds are patentable, and the prescriptions of privatised intellectual property rights held by large agri-business corporations extends commoditisation to the molecular level, raising questions about who owns, controls, and benefits from smallholder farming (Muller 2006; McGuire 2008; Dowd-Uribe 2014; Engdahl 2007; McAfee 2003; Kenney 1998; Lewontin 1998). Kloppenburg (2010) provides a useful reminder that it is not the technology of GE seeds that is particularly concerning, but rather the top-down and privatised relationships through which the technology is being disseminated.

2.4.2. New actors and motivations

A second novel aspect relates to the actors who are driving the NGR in Africa, their motivations, and—crucially in a time of cuts to overseas development assistance—how it is being financed. Some of the key actors in the first green revolution, including the Rockefeller and Ford Foundations, are still prominent in framing and implementing the NGR. Rather than forming partnerships with national

research centres, these foundations are increasingly looking towards the private sector for funding, research, and implementation (Seshia & Scoones 2003). The result is a much more diffuse agricultural development landscape, involving both a greater number and a more diverse range of actors. Partners of the Alliance for a New Green Revolution in Africa (AGRA), for instance, include private foundations (e.g. the Ford, Rockefeller, and Bill and Melinda Gates Foundations), private corporations (e.g. Cargill, Syngenta, and Yara), national development agencies (e.g. the UK's Department for International Development (DFID)), international agencies (e.g. World Bank (WB), World Food Programme), universities (e.g. Imperial College London and Sokoine University, Tanzania), and national agricultural ministries.

Through the NGR, the mainstream agricultural development narrative has begun to dovetail with a broader shift towards 'financialisation'. Financialisation can be defined as 'the increasing importance of financial motives, financial actors, financial markets, and financial institutions in the operation of economies and their governing institutions' (Epstein 2005, p.3). Finance in farming has a long history, for example grain futures markets since the mid-nineteenth century (see Williams 2014; Gray & Peck 1981), but a recent wave can be traced back to the restructuring of Western economies along neoliberal lines from the 1970s (Isakson 2013; Ouma 2016b; Christophers 2015). Financialisation has permeated nearly every aspect of agriculture including food retailing (Burch & Lawrence 2009), food processing (Russi 2013), grain trading (Murphy et al. 2012), price setting (Ghosh et al. 2012), input provision (Brooks 2016), and ownership and control of farmland (Cotula 2012; Akram-Lodhi 2012).

The involvement of financial actors, models, and motivations has accelerated and qualitatively changed in the wake of the financial crash in the late 2000s (Isakson 2013; Bruno et al. 2013; Miller et al. 2010; Silici & Locke 2013). A report by the Food and Agriculture Organisation of the United Nations (FAO) explains this as a desire among investors for 'alternative investment opportunities that are decoupled from international financial markets and that contribute to a diversification away from investments in traditional asset classes' (Miller et al. 2010, p.52). One trend is the increasing involvement of financial actors that 'invest large sums of money in securities, real estate, and other assets on behalf of third parties', and include private equity funds, hedge funds, and venture capital firms (Daniel 2012, p.704). Concurrently, actors already engaged in the agricultural sector, for example food production, processing, and retail corporations, are sourcing an increasing proportion of their revenue from financial profits (Palley 2007; Burch & Lawrence 2009). The reasons for this shift towards the engagement of financial actors, models, and motivations in the agricultural sector will be explored empirically in Chapter 5.

The financialisation of agriculture has materialised in a number of ways. These include engagement with increasingly complex financial derivatives markets, which involves speculation and hedging on

contracts deriving value from an underlying commodity or bundle of commodities (Russi 2013; Breger Bush 2012); through the direct acquisition of farmland and agricultural production (Makki 2012; Daniel & Mittal 2009); and through investment in upstream and downstream companies in farm-to-fork value chains (McMichael 2013b).

The increasing involvement of large and vertically integrated agribusinesses, as well as a range of new actors and business models, has sparked debates over modes of agricultural organisation, and in particular over the role of smallholder farmers within value chains (Collier & Dercon 2014). On the one hand, there are arguments that smallholder farmers are unable or unwilling to expand their production sufficiently to meet demand. Building on legacies of plantation and large-scale commercial agriculture, this has prompted calls for the organisation of smallholder farmers into more centralised production units, for example 'superfarms' of over 100,000 hectares (MacDonald 2011; Makki 2012). Although there is little evidence for economies of scale in terms of yield on farms of this size, proponents argue that superfarms form more effective conduits for investment capital. According to Russian emerging markets investment bank Renaissance Capital (2011, p.14):

> *'the volatility of food prices, the rapid urbanisation that characterises large parts of our planet, the relative undercapitalisation of the sector and the sheer variability of the agricultural labour force in its current form all suggest that in creating those conduits for capital, superfarms are likely to play a hugely important role in attracting capital to the sector.'*

On the other hand, and increasingly evident in the literature on the NGR for Africa, is the perspective that smallholder farmers can be reshaped and integrated into value chains as entrepreneurs. This has been voiced as advocacy for 'bottom billion capitalism' that can be unlocked through, for example, SII as discussed later in this chapter (See Blowfield & Dolan 2014; Waddock 2002; Prahalad & Hart 2008). This approach focuses on providing opportunities, goods, and services for the four billion people earning less than USD 8 a day, and who are understood as largely excluded from participation in the global economy. The reframing of inequality as a huge and largely untapped market opportunity has led to a corresponding shift in perceptions of the poor. Rather than seeing the poor as a population that needs 'fixing' or supporting though charity, impact investing takes an asset-based view of the poor, who have their own talents, needs, energies, and interests. From this perspective, given adequate resources the poor can become not only a huge consumer market, but also entrepreneurs with responsibility for driving their own economic and social development.

Actors like the World Bank (WB) and DFID reiterate long-standing agricultural transition narratives by emphasising the benefits of incorporating smallholder farmers as entrepreneurs into global value

chains, for example through certification schemes such as Fair Trade and contract farming. Contract farming refers to agricultural production based on a prior agreement between buyers and sellers. Often the market buyer supports farmers with inputs and a guaranteed market in return for specifying the quality required and timeframe for product delivery. The impacts of 'living under contract' have been widely debated in the literature (e.g. Little & Watts 1994; Kirsten & Sartorius 2002; Glover & Kusterer 1990). In its *2008 World Development Report*, the WB identifies 'agricultural entrepreneurship' as a pathway out of rural poverty in the context of the liberalisation of agricultural markets and the new opportunities this is understood to provide (World Bank 2008, p.72). From one perspective, this opens up market opportunities for smallholder farmers with the aim of alleviating poverty and improving standards of living, but it may also form a reworked 'betting on the strong', with farmers who are unable to take on new roles in global value chains expected to 'step out' of farming, or 'hang in' to subsistence production (Wiggins & Keats 2015; Kirsten & Sartorius 2002).

The involvement of financial actors and motivations in agriculture has faced criticism on multiple grounds, especially in the context of the financial crash and food price hikes in the late 2000s (Clapp 2014; Russi 2013). Civil society groups such as Oxfam, The War on Want, and GRAIN have linked speculation in the agricultural sector to the 2008–2009 food price hikes, displacement through land acquisition and consolidation, and more generally to increasing food price volatility (Oxfam International 2013; Worthy 2011; Jones 2010). In particular, there is a large and growing body of critical literature and related social movement activism opposed to 'land grabbing' and the direct investment and speculation on land (for example Daniel & Mittal 2009; Borras & Franco 2012; Akram-Lodhi 2012; De Schutter 2011; White et al. 2012; McMichael 2012; Daniel 2012; Daniel & Mittal 2010; GRAIN 2010). An Oxfam report portrayed financial actors as 'powerful investors who play commodities markets like casinos, for whom food is just another financial asset—like stocks and shares or mortgage-backed securities' (Oxfam 2011, p.6). Peet (2007) writes that these financial actors are having increasing power over global development policy and practice, and there has been a corresponding shift in the role of the state to facilitating entrepreneurial activity. He calls this a 'global bribery system' characterised by an 'immoral attitude that 'development' can only come to the poor people of the world through increasing the power and profit of the already rich people of the world' (Peet 2007, pp.50, 115).

2.4.3. Financing the new green revolution for Africa: social impact investing

SII lies at the nexus of concerns over how to finance the NGR for Africa, and concerns over the predatory and speculative nature of some private sector engagements in the agricultural sector. SII is based on borrowing financial mechanisms, processes, and assumptions from more traditional financial sectors, but applying them with the explicit intention of bringing about positive social and/or

environmental benefits (Bugg-Levine & Emerson 2011; Morgan 2010; Waddock 2002). Impact investors seek to achieve a double or even triple bottom line through 'a high octane blend of economic performance and sustained environmental and social impact' (Bugg-Levine & Emerson 2011, p.32). Some impact investors focus purely on positive social or environmental impacts, while others aim to achieve both. In this thesis, I focus on investors aiming to achieve positive social impacts. While the level of the expected return differs, as will be discussed in Chapter 5, all impact investors have some expectations of a financial return, and this makes it distinct from charity or aid.

'Social impact' can be pursued in a variety of ways, including through the business operations and processes employed, the products or services produced, and the population served. Impact investors are targeting under-served communities, for example farmers in the Global South, and also sectors that have traditionally been the preserve of states and civil society like education, healthcare, social housing, and agriculture. Milligan and Schoning (2011 p.162) talk about SII as a 'craze' or a 'wave' as firms are reportedly 'scrambling to put out funds and programs in which people can invest' with the potential for mobilised capital in the range of USD 500 billion to USD 1 trillion.

The term 'impact investing' was first coined in 2007 by the Rockefeller Foundation, but the roots of the concept far precede this date. Traces of early forms can be noted in the practices of the Quakers in seventeenth century England who aligned their financial activities with their social and spiritual values, and also in the early building society movement in eighteenth century England (Bugg-Levine & Emerson 2011). More recent threads of values-based business that feed into SII include microfinance, anti-apartheid divestment campaigns of the 1980s, corporate social responsibility, and the Fair Trade movement. The history of microfinance in particular provides lessons for SII in connection to the challenges of rapid expansion and an increasingly commercial outlook (CGAP 2013; Hummels & de Leede 2014; Kutney 2013). How SII relates to some of these other approaches will be discussed in Chapter 5.

In the financial sector there are examples of organisations that claim to promote socially and environmentally sensitive investing. These include Development Finance Institutions (DFIs), such as the Commonwealth Development Corporation Group (now known as The CDC Group) established in 1948, and the WB's Finance Corporation founded almost a decade later in 1956 (Hockstadter & Scheck 2015). The extent to which these organisations have succeeded in meeting these aims, however, is disputed (see Mawdsley 2015). Some financial services organisations, such as Prudential, have also historically had programmes drawing on similar principles to SII (Morgan 2010). Finally, there is a tradition of foundations and charities involved in so-called 'venture philanthropy', the non-profit provision of capital through non-returnable debt, grants, and equity (John 2006; Cheng & Mohamed 2010).

Until the late 2000s, however, investing with the explicit intention of proactively generating social or environmental impacts as well as financial returns was largely a sideline activity rather than mainstream. This is because impact investing involves, according to Bugg-Levine & Emerson (2011, p.32): 'disrupting a world organised around the competing beliefs that for-profit investments should only produce financial returns, while people who care about social problems should donate money in an attempt to solve these problems or wait for government to step in'. It treads firmly across the divides that are often drawn between states and markets and between charity and commerce, leading to a dovetailing of methods and motivations between investors and philanthropists (Nicholls et al. 2015; McGoey 2014).

Now, according to a Monitor Institute (2009, p.4) report, 'using profit-seeking investment to generate social and environmental good is moving from a periphery of activist investors to the core of mainstream financial institutions'. The mainstreaming of SII raises some key questions for agricultural development, including the implications of the involvement of social impact investors for access to, and control of, natural resources and agricultural produce; how smallholder farmers are to be integrated into agricultural value chains that aim to generate financial returns as well as positive social impacts; how 'social impact' is defined and by who; how the timeframes of investment fit with the timeframes of agricultural production; how social and financial impacts are balanced and which are prioritised; and whether SII unfolds in ways that differ from previous agricultural development paradigms. These questions will be unpacked later in the thesis.

2.5. Agricultural development in Tanzania

Historically, Tanzania has had an unsettled relationship with foreign investment. It has experienced radically shifting approaches to agricultural policy, from the laboratory of colonial experimentation, through ideologically fuelled African socialism under President Julius Nyerere, to being presented as a flagship of market-orientated development. Although the extent of these transformations continues to be debated, they have all left their mark in different ways.

2.5.1. Colonial interventions in Tanzanian agriculture

What is now Tanzania experienced repeated waves of external rule and colonisation to varying extents and by various powers, including the Portuguese (sixteenth to eighteenth centuries), Omani Arabs (mid-eighteenth to mid-nineteenth centuries), the Germans (1890s to World War One), and then the British until 1961. While earlier waves of colonialism were concentrated on the coastal

regions, the late nineteenth century saw Iringa Region, and its major ethnic group the Hehe, propelled onto the colonial stage as it became a battleground for German attempts to conquer the East African mainland. The infamous Hehe Chief Mkwawa headed an army that routed a German regiment in 1891 at Lugalo in Kilolo District, and then defied capture until 1898 when he took his own life (Redmayne 1968; Pizzo 2007; Gewald 2005). On finding his body, the Germans took Mkwawa's head as a demonstration of their victory over the 'natives' in the East African mainland. The skull was eventually returned to Iringa by Britain in 1954 after being stipulated by the Treaty of Versailles.

The Tanganyika Territory became enmeshed in the British Empire as part of a League of Nations mandate in 1922, following the fall of the German Empire in East Africa (Iliffe 1979). The result of protracted wars with the German colonial forces from the 1890s–1900s, and subsequent depopulation and disruption, was that when British colonial officers surveyed the Southern Highlands they reported back that the area was underused (Gewald 2005; Pizzo 2007). This prompted campaigns to realise the full potential of the land by encouraging European settlement, which was equated with modern farming methods (Daley, 2005). Alongside the continued encouragement of white settlers, the British colonial administration pursued two primary agricultural policies in Tanzania: large-scale agriculture through, for example, the groundnut schemes, and land development and soil conservation policies. Through these policies the colonial state attempted to transform the physical and social landscape of Tanzania to facilitate the commercialisation of agriculture (Bjerk 2010).

The groundnut schemes were initiated in 1946 in the districts of Kongwa, Urambo, and Nachingwea as a joint venture between the colonial state and the United African Company, a subsidiary of Unilever (Rizzo 2006; Hogendorn & Scott 1981; Scott 1998; Coulson 1977; Bjerk 2010). The intention was to clear three million acres of vegetation to create plantations, resettle resident populations, and implement European agricultural expertise and mechanisation technologies to produce groundnuts to export for cooking oil. By 1950, however, less than 10% of the intended area had been cleared, and the projects that were running were making a loss (Scott 1998). The schemes failed due to rushed planning, a lack of detailed mapping or surveys of local ecological conditions like soil quality and rainfall patterns, and untried and inappropriate mechanised equipment.

Another strand of British colonial agricultural strategy consisted of land development and soil conservation policies, which were aimed at enhancing productivity by introducing technical agricultural prescriptions. These policies also had a secondary aim to control populations and render them legible to the colonial state (Scott 1998; Hyden 1980). Of particular concern were the 'over-crowded mountainous areas' and the 'overstocked pastoral areas', for example in Sukumaland to the northwest of Tanganyika (Berry & Townshend 1972; Schuknecht 2010). Under the 1932 Native Authorities Ordinance, rural people found themselves restricted by bye-laws covering a wide range of

agricultural practices, including the building of terraces and the de-stocking of livestock herds (Spalding 1993; Chachage 1993). Enforced by a military organisation of Department of Agriculture extension workers and backed up by threats of fines or imprisonment for non-compliance, these bye-laws were highly unpopular and in many cases provoked passive and active resistance (Coulson 1977; Jennings 2007; Berry & Townshend 1972; Schuknecht 2010). Although the bye-laws were aimed at reducing the risk of soil erosion, for the local farmers the result was often more work for reduced rewards, disruptive new gendered divisions of labour, and an increased risk of destructive landslides (Maack 1996).

2.5.2. 1961–1967 post-independence consolidation

What is now Tanzania achieved independence in 1961. The period after independence was one of consolidation of the party, the Tanganyika African National Union (TANU), and the building of national unity under a general ideology of modernisation. Shivji (2006) notes that a lack of capital was repeatedly given as a reason for the country's poor economic performance, and this prompted appeals to foreign investors in the first few years after independence. In the early 1960s, measures were passed to create an enabling environment to incentivise the influx of foreign investment, for example through the Foreign Investments (Protection) Act of 1963 and the First Five Year Plan for Development in 1964 (Shivji 2006; Coulson 2013; Rweyemamu 1973). Through these policies, the state attempted to reassure potential investors that their assets would be protected, as well as identifying land for further investment. Cooksey & Kelsall (2011) write that the advent of pro-market policies in the early post-independence period, alongside a reasonably centralised political environment and steadily rising per capita incomes, actually saw the creation of a favourable business and investment climate. During this period, Tanzania followed a policy of 'tempered capitalism overseen by a socially responsible government' (Pratt 1976, p.174).

In terms of agricultural policy, the approach in the early post-independence period was firmly centred on modernisation fuelled by this expected foreign investment. President Nyerere positioned rural lives and livelihoods at the centre of national economic and social development: 'while other countries aim to reach the moon we must aim for the time being, at any rate, to reach the village' (Nyerere 1961 quoted in Dryden 1968). This period saw a two-pronged approach to agricultural development incorporating 'improvement' and 'transformation' (Mapolu 1986; Jennings 2003; Nindi 1985). 'Improvement' aimed at enhancing agricultural productivity, especially of cash crops, through extension services and the introduction of high yielding agricultural inputs and practices (Mhando 2011; Jennings 2003). The 'transformation' approach focused on radically reshaping rural areas through voluntary resettlement into villages to enable easier provision of services (Bjerk 2010; Scott 1998). A 'focal point' approach was employed to assist 'those with the initiative, the resources and

the land to respond to the opportunities of cash crop production' (Ministry of Agriculture quoted in Pratt 1976, p.230). This is similar to policies of the colonial state, which involving targeting agricultural extension and input services towards so-called 'progressive' farmers (Scott 1998).

2.5.3. 1967–1977 decade of *ujamaa*

By 1967, it became clear to Nyerere and TANU that, for three reasons, it was untenable for the development of a Tanzanian socialist society to be based on foreign capital. Firstly, despite the heavy reliance on investments and the provision of associated incentives, actual flows of foreign capital had been lower than expected (Karioki 1979; Shivji 2006). This contributed to the notion that 'to base our economy on foreign investment is a serious mistake' (Abdulrahman Mohamed Babu, former Minister of Commerce and Cooperatives quoted in Karioki 1979, p.75).

Secondly, during the 1960s Tanzania saw the unexpected withdrawal of foreign aid due to the ideological marriage of national foreign policy and developmental aims in this period. The Tanzanian government strongly opposed the continued support given by Britain and other Western powers to the white dominated regimes in Southern Africa, and this in the context of Cold War politics led to a slow down in loans, aid and investment from previously important financers like Britain and West Germany. The loans that did exist came with an increasingly crippling burden of interest, conditions, and repayment requirements (Nnoli 1978).

Finally, within Tanzania, evidence was accumulating that benefits from the annual growth rate of 4.2% were not widely shared. Profit-driven investment was accumulating in certain sectors of the economy, for example plantation agriculture, at the expense of others. The early years of independence had seen widening social stratifications, both racially between Asians, Europeans, and Africans, and in terms of class as farmers who were better placed to take advantage of the promotion of cash crops through the 'focal point' approach benefitted disproportionately (Pratt 1976).

The shift in policy brought about by the Arusha Declaration in 1967 was thus an attempt to counter both a reliance on foreign capital flows, and to check the growth of domestic capitalist practices and mindsets to move towards building a socialist society. The late 1960s subsequently saw a shift from the initial heavy dependence on loans and investment from Britain and other Western powers, towards a policy of non-alignment (Pratt 1976). The 1967 Arusha Declaration heralded the ideological hegemony of what has been called the '*ujamaa* decade' (Ingle 1972; Jennings 2003; Nnoli 1978). In the declaration Nyerere codified his commitment to self-reliance and the socialist transformation of Tanzanian rural society to address development needs (Mwansasu & Pratt 1979; Mhando 2011).

Ujamaa was an ambiguous strategy that attempted to mobilise rural people by drawing on pre-existing communitarian principles and a nostalgic vision of rural life, and combining them with a distinctly mid-twentieth century modernising ethic (Hyden 1975; Bjerk 2010). Traditionally, *ujamaa* referred to the organisation of communal ownership and production within extended families. Nyerere, however, reframed this concept into what Bjerk (2010, p.285) calls a 'stunningly comprehensive ideological term' by encouraging the extension of *ujamaa* principles to voluntary cooperation beyond the family unit (Hyden 1975). In this way, *ujamaa* was a discursive framing intrinsically opposed to the focus on private wealth accumulation, profit-maximisation, and inherent self-interest that is at the heart of a capitalist outlook (Pratt 1976). Rather than looking to the 'global village' for development financing and models, Tanzania was to look to the 'local village' (Shivji 2006).

A central element of *ujamaa* was a commitment to what was initially the voluntary resettlement of rural people into villages near trunk roads. This was intended to facilitate service provision and bureaucratic supervision, and to encourage communal farming of cash crops. The period from 1967–1977 saw the increasingly coercive resettlement of farmers into villages through the 'operations', the nationalisation of the commanding heights of the economy, the establishment of parastatals for example crop marketing boards, and a strictly enforced leadership code for party officials.

While improvements to public service provision were achieved during this '*ujamaa* decade', analysts have highlighted negative implications of villagisation for both communities and the environment. In some cases, resettlement involved the movement of people away from fertile agricultural lands to less productive areas nearer the roads, and soil erosion resulted from more concentrated populations of people and cattle in villages. Around 60% of the newly created villages were on semiarid land unsuitable for cultivation, meaning that farmers had to walk long distances to reach their farms (Scott 1998). Communal farming plans increased workloads, and the promised agricultural inputs and mechanised equipment were often late or never appeared. The result was a much smaller uptake of communal farming than planned. Another side effect was the breakdown of social relations and community ties due to forced resettlement.

According to de Vries and Fortmann (1979, p. 130), 'many people objected not so much to the move as to the way it was done' due to the poor planning of village locations, the use of force, and lack of services provided. By 1974 almost 20% of the registered rural population were said to live in around 5,000 villages, and only 8% of these had progressed to full co-operative status (Mhando 2011; Lofchie 1978). Many similarities can be identified between these *ujamaa* policies and those of the colonial period discussed earlier, for example the emphasis on the need to modernise smallholder

farming and bring rural people under the control of the state, and of large-scale planning, technology, and population resettlement as means of achieving this.

Ujamaa policies have been understood in several ways, including as a strategy of the 'bureaucratic bourgeoise' (Shivji 1970); as a project of post-colonial nation-building (Hunter 2008; Bjerk 2010); and as an example of the aesthetic of state 'high modernism' (Scott 1998; Bender 2008). Fundamentally, however, the *ujamaa* decade was about defining the path of national development (Pratt 1976). It was an attempt to align foreign policy with that of pragmatic domestic policy and the ideological approach of Nyerere. This necessarily entailed a divorce from dependence on foreign capital that was tied to problematic and politicised foreign policy approaches and limited in supply. In response, the focus shifted to defining development as driven by the efforts of Tanzanian citizens, and particularly rural citizens, rather than foreign capital or international donors (Green 2014a). In the words of Nyerere 'only Tanzanians are sufficiently interested to develop Tanzania in the interests of Tanzanians, and only Tanzanians can see what those interests are' (Nyerere 1968, p.238).

2.5.4. 1980–present: economic deterioration and liberalisation

In the 1980s, the pressures of external factors—rising oil prices, world recession, adverse international terms of trade, the burden of debt-servicing, and drought—exacerbated issues associated with the policies of the '*ujamaa* decade', against the backdrop of the Tanzanian war with Uganda 1978–79. This included a fall in the volume of exports and a chronic shortage of foreign exchange leading to an inability to import industrial and agricultural inputs, inflation of 36% by 1984, shortages of consumer goods, expanding black markets and illegal cross-border trade, and increasing unemployment: an 'ever deepening vicious cycle of shortages, inflation, corruption and crippling inefficiency' (Shivji 1986, p.4; Coulson 2013; Tripp 1989).

The early 1980s also witnessed unprecedented debates in the public media surrounding economic liberalisation and multi-party politics, signalling the breakdown of the legitimising ideological hegemony of *ujamaa* (Shivji 2006). The shift towards economic and political liberalisation was, however, by no means smooth. In 1979 the International Monetary Fund (IMF) recommended that Tanzania should devalue its currency in order to prevent economic collapse. Nyerere, however, refused, and was supported in that decision by a range of economists and political scientists who objected to the rapidity and extent of the changes suggested by the IMF (Coulson 2013).

In 1985, President Nyerere stepped down and was replaced by Mwinyi in a move that signposted the beginning of the end of official African socialism in Tanzania. The following years saw a shift in narrative from 'self-reliance' and 'villagisation' to 'entrepreneurship' and 'globalisation' (Shivji

2006). In 1986, Mwinyi signed the Standby Agreement with the IMF and devalued the Tanzanian currency. This unlocked loans through commitments to structural adjustment, which was to be implemented in three stages: trade liberalisation, foreign investment deregulation, and parastatal and civil service reform (Gibbon 1995). The liberalisation of the Tanzanian economic and political system under the guidance of the IMF and WB accelerated after Mkapa won the first post-independence multi-party election in 1995. In 1999, the Tanzanian government formulated the Tanzania Development Vision 2025 in recognition that 15 years of structural adjustment had culminated in a loss of direction and philosophy for long-term development. The Development Vision 2025 promoted a quality life for all through good governance and the rule of law, and entailed building a strong and resilient economy (URT Planning Commission 1999). This period saw rapid privatisation, de-nationalisation, and a return to the 'embrace' investors approach of the early 1960s (Shivji 2006).

As a result of this economic and political liberalisation, the late 1990s and early 2000s saw an influx of foreign investment into Tanzania. In particular, South African and Chinese capital flowed into strategic sectors like mining, utilities, finance, and land (Coulson 2013). Excluding South Africa, by 2010 Tanzania had become the leading African destination for non-oil foreign investments (Coulson 2013). With recent discoveries of huge oil and gas reserves off the Tanzanian coast, this influx of foreign investment is likely to continue to increase (UNDP 2015).

In agricultural policy, the principles of economic liberalisation have been most clearly codified through the 2009 strategy of *Kilimo Kwanza* (Agriculture First). *Kilimo Kwanza* represents yet again the foregrounding of agriculture in national economic development. It is understood as a national commitment to catalyse agricultural transformation, based on enhancing Tanzania's involvement in regional and global agricultural markets to wake the 'sleeping agricultural giant' (Binswanger-Mkhize & Gautam 2010; URT 2013b). It advocates private sector orientation supported by public sector guidance, with a particular focus on the crops that are consumed by Tanzanians rather than export crops. The main drivers of agricultural development are therefore understood to be the farmers themselves, in partnership with the private sector.

A major way in which the *Kilimo Kwanza* strategy has been implemented is through the Southern Agricultural Growth Corridor of Tanzania (SAGCOT), initiated in 2010 at the World Economic Forum Africa Summit. The SAGCOT is an extremely ambitious initiative to create a public-private platform to mobilise USD 2.1 billion in new private sector agribusiness investments, supported by USD 1.3 billion in public sector investments to bring 350,000 hectares of farmland into commercial production for regional and international markets by 2020 (Kilimo Kwanza Executive Committee 2013; Milder 2013; Paul & Steinbrecher 2013). Through the SAGCOT the aim is to provide over 420,000 new jobs in agriculture value chains (Kilimo Kwanza Executive Committee 2013). The

SAGCOT Centre acts as a referral agency in identifying land available for investment within the corridor and negotiating relationships between various stakeholders, for example between landowners, farmers, private investors, donors, and the state.[2] The commitment to private sector driven agricultural development within *Kilimo Kwanza* was further entrenched in the 2011 Development Plan, which Green (2014b) likened to a reversed Arusha Declaration. The Development Plan promotes 'inclusive growth' through building agricultural networks that enrol smallholder farmers as well as domestic and multinational corporations.

Tanzania has been held up as a 'star performer' by the international financial institutions for its political and economic liberalisation policies, and for quickly reaching completion of the Heavily Indebted Poor Countries Initiative and the Poverty Reduction Strategy Paper programmes (Cooksey 2011). This depiction as a success story of neoliberal structural adjustment has, however, been challenged. Cooksey (2011) argues that the extent of economic liberalisation in Tanzania has been exaggerated and glorified by the IMF and the WB. Agricultural productivity, yields, and production per capita of food grains have continued to stagnate or even decline. Arguably, liberalisation of domestic maize trade was a ratification of the parallel trade that had continued to function alongside official flows (Cooksey 2011; Skarstein 2005). Some critics highlight a lack of trickle-down with the benefits of growth captured by the salaried elite. Coulson (2013), for example, highlights that from the mid 2000s Tanzania's average GDP growth rate of 6-8% has not translated into benefits for rural Tanzanians, and the liberalisation of crop marketing has led to increasing prices for inputs, declining fertiliser use, lower producer quality, and market fragmentation.

A return to statist policies has also been observed in Tanzania since 2000, with the continuation of central bureaucratic influence on cooperative unions and the re-emergence of national crop boards (Cooksey 2011). The government regularly intervenes in the trade of major staple and export crops like maize and rice when it is politically expedient to do so, with 'prices becoming political' and reports that 'the market is so full of propaganda'.[3] The government has also become involved in agricultural production with the provision of subsidies through the National Agricultural Input Voucher Scheme that ran from 2009–2015 (Hepelwa et al. 2013; Malhotra 2013; Binswanger-Mkhize & Gautam 2010). Ultimately, despite economic and political liberalisation from the 1980s, as of 2017 Tanzania is ranked 132 out of 190 on the WB's ease of doing business index, and there is a lack of investor confidence over long-term economic policy (Cooksey & Kelsall 2011; World Bank 2017). According to Robert Jenkins from The Gatsby Charitable Foundation, 'from an investment

[2] Interview with Ferdinand Mgaya, Ihemi Cluster Coordinator, SAGCOT Centre, Iringa, 19/08/2016.

[3] Interview with Edward Agaba, Team Leader, Inclusive Green Growth of Smallholder Agriculture Program, AGRA Tanzania, phone, 21/11/2015. Interview with Otto Ulyate, Farm Manager, Rutuba Farm, Iringa, 01/12/2015.

perspective Tanzania must be one of the worst places in the world to work, the regulatory environment is just impossible… it is like working in treacle'.[4] This raises questions about the mobility of capital in different contexts that are taken up in more detail in Chapter 5.

2.6. Region selection: Iringa

Figure 2.1 Map locating Iringa Region in Tanzania

[4] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.

2.6.1. Political, economic, and social profile

Iringa Region is located in the Southern Highlands of Tanzania, as depicted in Figure 2.1. It is composed of five districts: Iringa Municipal, Mafinga Town, Iringa District, Mufindi District, and Kilolo District. In the 1970s, the region experienced villagisation and resettlement operations with a high degree of force as people were moved away from fertile land in the valley bottom towards the trunk roads (Birch-Thomsen et al. 2001; Nindi 1985; de Vries & Fortmann 1979). Today, Iringa continues to be a site of policy experimentation as it is at the heart of the Ihemi pilot cluster of the SAGCOT (see Figure 2.1). This area was chosen as the pilot cluster due to its potential in terms of agricultural production, its position along the transport backbone from the coastal city of Dar es Salaam to Zambia, and the concentration of investors and agricultural development organisations already operating in the region. In terms of political allegiance, in the 2015 national election the rural areas voted overwhelmingly for the ruling party, CCM, while Iringa Town was a hotspot of support for the opposition party Chadema. This demonstrates continuing differences in outlooks and perspectives between rural and urban areas.

Economically, Iringa Region provides the fifth largest contribution to national gross domestic product (GDP) out of the mainland Tanzanian regions, and ranks second after Dar es Salaam in terms of per capita income (URT 2013b). Within the region, per capita contribution to GDP is uneven, with around half coming from Mufindi District where many large scale tea and timber plantations are located (URT 2013b). Industrial development, for example tomato processing and grain milling, remains mostly small-scale and located near Iringa Town. 85% of Iringa's GDP is generated from agriculture, and it is considered to be one of the 'big five' regions in Tanzania in terms of agricultural production, alongside Mbeya, Njombe, Rukwa, and Ruvuma (URT 2013b). These 'big five' regions form the Southern Highlands 'breadbasket', which is responsible for 46% of national maize production and almost 90% of maize procured by the National Food Reserve Agency (Bisanda et al. 1998; Lyimo 1996). Agriculture employs over 70% of the region's population, and over 80% of cultivation is carried out by smallholder farmers (URT 2016). There is much diversity in agricultural yields within the region, with drier Iringa District often a deficit area, while Kilolo and Mufindi Districts often produce surpluses.

As of the most recent census in 2012, the total population of Iringa Region was 941,238, with 42% of this population aged 15 years or younger and only 4% aged 65 years and older (URT 2016). Within the region 72% of households are found in rural locations (URT 2016). The majority of farmers in the research site belong to one of three *makabila* (tribes, ethnic groups): Hehe, Bena, and Kinga. Pastoral Maasai can also be found (URT 2013b). A minority belongs to other ethnic groups, and may have come to the region for marriage or work. After being pushed south during the Hehe conquest and territorial expansion in the nineteenth century, many Bena and Kinga moved north from the early

1900s, often being transported to work as labourers on sisal and tobacco plantations (Boesen & Mohele 1979).[5] Many settled in Iringa Region, moving into Hehe villages and obtaining land. These *makabila* now live side-by-side, although in certain areas there are sub-villages populated almost entirely by Bena, reflecting a large number of people who settled in the village at the same time.

2.6.2. Environmental profile

Using the classification drawn up by the National Maize Research Program, Iringa Region covers two agro-ecological zones: the intermediate and highland zones (Bisanda et al. 1998). Maize can be grown in both zones. The intermediate zone is between 1200 and 1600 metres above sea level (masl), while the highland zone is over 1,600 masl (Bisanda et al. 1998). The mean average rainfall is 600–1000mm in the intermediate zone, and 1000–1600mm in the highland zone (URT 2013b). Rainfall patterns are unimodal from November to May, although the timing and intensity of the rainfall can vary throughout the year, and from year to year. In the intermediate zone, soils tend to be weathered, leached, and acidic, with relatively low productivity unless treated with lime and fertiliser (URT 2013b).[6] The region is drained by the Little and Great Ruaha Rivers, 16% of the region is forested, and vegetation includes miombo woodlands, savannah, and mountain forest (URT 2013b).

2.7. District Selection: Lower Kilolo District

Kilolo District is located in the east of Iringa Region. It encompasses three divisions, 12 wards, 106 villages, 54,400 households and, as of the 2012 national census, a population of 228,130 (URT 2013a). 95% of the population live in rural areas and derive the majority of their income from livestock and agriculture. According to the 2005 Poverty and Human Development Report, 29% of the population in Kilolo District live below a basic needs poverty line (URT 2013b). The district is split into Lower Kilolo and Upper Kilolo. Lower Kilolo is located in the intermediate zone with maize as the major crop, while Upper Kilolo is in the highland zone where potatoes dominate. This research focuses on Lower Kilolo due to the centrality of maize in this area, and the concentration of agricultural social impact investors operating in the maize value chain, for example Cheetah Development and Silverlands, that form case studies in later chapters.

[5] Interview with farmer 86, Kipaduka, 19/10/2015. Interview with village chairman, Vitono, 07/10/2015. Interview with Marietta Fokas, Greek Club owner and wife of a tobacco farmer, Iringa, 10/12/2015

[6] Interview with Otto Ulyate, Farm Manager, Rutuba Farm, Iringa, 26/07/2016.

2.8. Village Selection

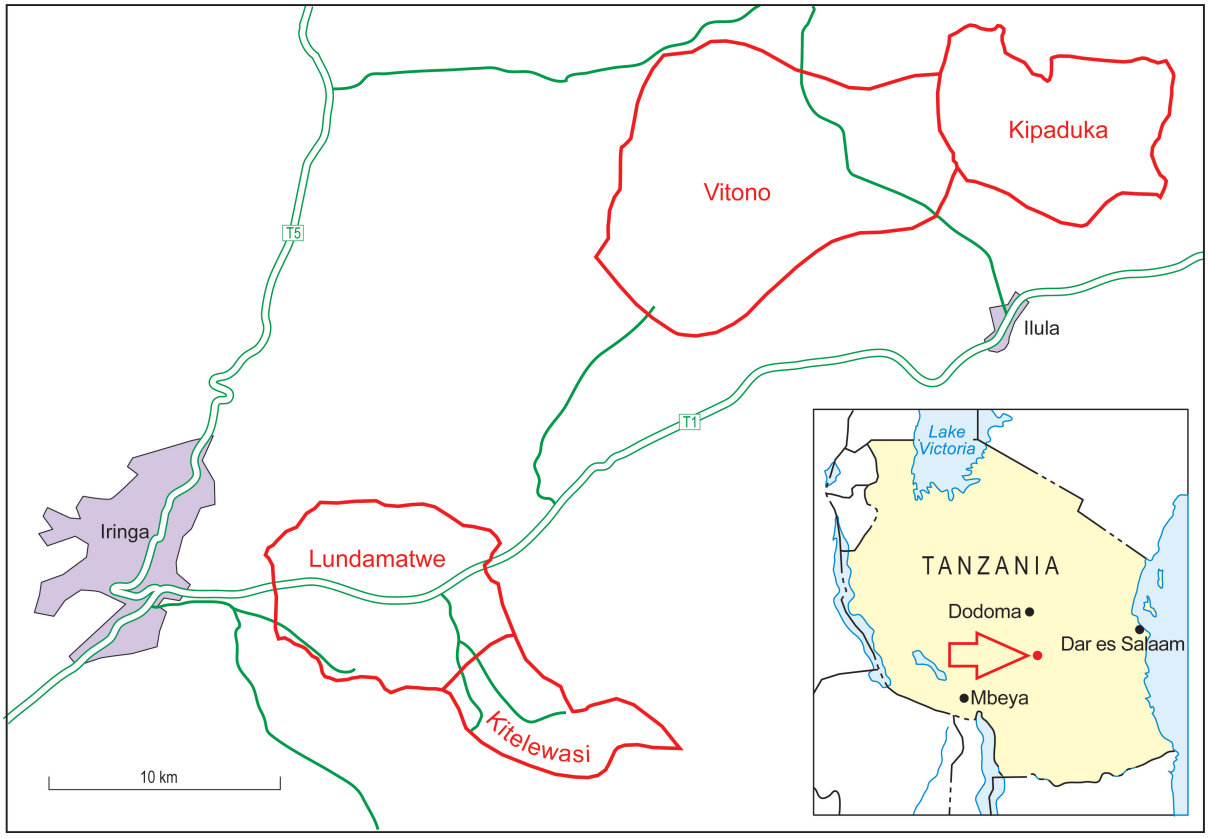

Figure 2.2 Map showing location of the four village research sites of Vitono, Kipaduka, Lundamatwe, and Kitelewasi.

Research was conducted across four villages to minimise research fatigue, and to investigate whether experiences of participation in the Cheetah Development programme were specific to particular villages, or more generalised. No significant differences were found between the villages, and participating farmers are grouped into a single sample population. Lundamartwe was chosen as the first research site as I was able to obtain contacts within the village. As Lundamartwe is a sprawling village with a series of largely geographically distinct sub-villages, I chose to focus on the sub-village of Lusaula. To select further research sites, I obtained lists of villages participating in the Cheetah Development programme, and from that list located three villages: Kitelewasi, Vitono and Kipaduka. Kitelewasi and Lundamartwe are located in Irole Ward about 20km from Iringa Town to the south off the Dar-Iringa trunk road. Vitono and Kipaduka are found further to the northeast in Uhambingeto Ward about 55km away from Iringa Town. The administrative boundaries of these villages were created during *ujamaa* resettlement in 1974, and are shown in Figure 2.2. All four villages are situated in the Mazombe semi-arid area, which is punctuated by inselbergs (isolated hills or mountains).

2.9. Summary

This chapter has discussed three major waves in agricultural development policies: the colonial period, the first green revolution, and recent calls for a new green revolution for Africa. Although there have been changes in the key actors driving these policies, and in their practical manifestations, there are cross-cutting similarities in the framing of smallholder farmers as the problem, and in the drive to modernise production based on faith in science and technology.

The green revolution centred on the dissemination of a technology package of HYVs and synthetic fertilisers in the Global South. It relied on a Malthusian conception of the threat of population growth and a technocratic and modernising ethic to neutralise potential communist sympathies by producing cheap food. Although it did lead to agricultural productivity increases in many parts of Latin America and Asia, and in that respect achieved its stated aim, it generated a range of negative social and environmental consequences. It also failed to have much of an impact in SSA, due to the inappropriateness of many of the HYV varieties, the varied ecological and socio-cultural environments on the continent, and relatively less well established institutional and communications infrastructure.

Despite evidence of negative impacts from the first green revolution, agricultural development has again come to the forefront of political agendas through calls for a NGR in Africa to boost productivity to feed the growing global population, stimulate local and national economic development, and alleviate poverty. Although this narrative resembles its predecessor in identifying smallholder productivity as the problem, and in promoting technocratic and modernising solutions, it does have new elements. These include the development of GE seeds; the increasing role of financial actors, models, and motivations; and debates over the role of smallholder farmers within global value chains. This presents a challenge in how to finance the NGR for Africa, given decreasing public funding and increasing concerns over the predatory and speculative nature of private sector involvement.

SII is being presented as a solution to this challenge. It is based on borrowing financial models and motivations, but applying them with the explicit intention to generate directly correlated positive social impacts in addition to financial returns. Although historical precursors can be identified, it is only since the late 2000s that SII has moved into the mainstream and has gained traction with organisations traditionally involved in agricultural development, as well as financial actors. The drivers of SII, the actors involved, how social impact is being defined and measured, and how African agriculture is constructed as a site for investment will be discussed in Chapter 5.

Tanzania is an apt location for a study of how SII in agriculture is unfolding, due to its unsettled historical relationship with foreign investment and experimentation in agricultural policy. The shift from the early post-independence focus on agricultural development driven by foreign investment to *ujamaa,* self-reliance, and villagisation was influenced by politicised foreign policy and clashing ideologies in the Cold War and post-colonial context. The '*ujamaa* decade' of African socialism that involved looking to the 'local village' for the drivers of development makes the more recent shift back to 'wooing' foreign investors all the more striking, even though the extent of this shift in practice has been questioned. Despite the dramatic changes in policy orientation there are continuities throughout the post-independence period, especially relating to the centrality of agriculture in the national development vision. Within Tanzania, Iringa Region is an appropriate site for an exploration of recent trends in SII and agricultural development as it is at the heart of the SAGCOT initiative and has a crowded agricultural development sector. Lower Kilolo District is a productive region for maize farming, and has been the focus of multiple previous waves of agricultural development initiatives that have left their mark on the socio-ecological landscape. Farmer livelihoods in Lower Kilolo will be explored further in Chapter 7.

3. Analysing agrarian change and development

3.1. Introduction

As we saw in Chapter 2, agricultural development projects have previously failed to achieve intended impacts in terms of modernising and commercialising smallholder farming to boost agricultural productivity and alleviate poverty. Agricultural development efforts have also often resulted in unexpected consequences, or impacts that are socially and geographically uneven. Theorists have attempted to understand these processes of agrarian change, and specifically why smallholder farmers do what they do and not necessarily what they are told to do by others. Perspectives on agrarian change originate from a variety of vantage points, from early political economy work on the 'agrarian question' to recent elaborations within political ecology that push the boundaries of analysing human-environment interactions.

In this chapter, I discuss political economy approaches to outline the broad themes, tensions, gaps, and debates surrounding agrarian change and development. I then examine contributions from political ecology, including early structural Marxist approaches, and more recent dialogues with the narrative turn, feminist geographies, and post-human, network, and assemblage geographies. Finally, the chapter outlines the analytical themes and concepts that shape this thesis. I argue that an approach situated broadly in political ecology, using the concept of assemblages, enables me to draw together histories, geographies, situated cultures, and a diverse range of actors. Within this approach, I unpack three key concepts and how they are put to work: power, culture through moral economies, and the role of socio-material entities.

3.2. From political economy to political ecology

3.2.1. Political economy

Political economy refers to the study of relationships between economic and political processes. It 'enquires into the origins, character and distribution of wealth' (Castree 2010, pp.1734–1735). Political economy is a large and diverse field, with scholars taking differing perspectives on capitalism and the functioning of markets within society. It includes proponents of neoclassical economics and rational choice drawing on the work of Adam Smith, John Stuart Mill, and Thomas Malthus, as well as those drawing on Marxist analyses, such as Karl Polanyi, David Harvey, and James O'Connor. From the 1970s, critical Geography has been deeply influenced by Marxist analyses, and core questions relate to means of production and social reproduction; forms of valuation; environmental impacts of capitalist processes; development and social change; inequality,

exploitation, and class struggle; the responsibilities of governments in the economy; power relations in resource allocation; and how markets and commodities are constructed.

This section explores some key debates within political economy relating to how specific forms of capitalist agricultural development unfold in particular places.

3.2.1.1. Agrarian questions

A major debate in political economy surrounds the so-called agrarian question. This relates to the nature of smallholder farming, and the ways in which capitalism transforms agriculture. Early debates stem from Marx's (2004 [1867]) proposal that for a capitalist transition to occur in rural areas, small farms need to be enclosed leading to the separation of producers from the means of production, as in early modern England. Other Marxist political economy scholars took up this debate over agrarian pathways out of economic 'backwardness' in different geographical contexts at the turn of the twentieth century (see Byres 1986 for a discussion). Lenin (1961 [1899]), for example, argued that there were two ways in which the Russian peasantry was moving towards capitalism: through land takeovers by capitalist farmers, and through internal socio-economic differentiation and the development of class exploitation. The argument for rural transition towards capitalist relations was given further fuel by Kautsky (1988 [1899]), who proposed that the economies of scale enabled on larger farms would enable the implementation of new technologies. Kautsky recognised that this may not prompt a wholesale transition in terms of land ownership, as the practices of wage labour and farming were not necessarily mutually exclusive. Both of these issues raised by Kautsky remain key areas of debate in relation to today's agri-food system.

Another prominent agrarian economist, Chayanov (1966 [1925]), presented a more active vision of Russian peasants as following a distinct logic based on satisfying their own needs, rather than focusing on profit-maximisation. From this perspective, peasants work as hard as is necessary to meet household needs until the drudgery outweighs the benefits: the so-called consumption-labour-balance principle. For Chayanov, the social differentiation that Lenin heralded as evidence for a rural transition to capitalism was in fact a temporary shift based on the demographic composition of households, for example the number of dependents at a particular time. This means that peasants would not inevitably transition to capitalist relations unless facing pressure from external forces.

Chayanov also recognised that peasants do not only work to sustain their own bodies, but also to sustain social relationships, for example to meet obligations and pay taxes and rents. Agriculture is therefore firmly embedded in social relations, rather than being a separate sphere of production. Chayanov highlighted that smallholder farmers sometimes act in ways that seem perverse from a

capitalist perspective. For instance, peasants may be willing to pay very high land rents if it means they can increase production to meet livelihood demands. They can do this as, unlike on a capitalist farm, labour is drawn mainly from the family and so comes at no extra monetary cost. This tendency for self-exploitation is what enables smallholder farmers to continue to coexist within capitalist economies, as long as taxes and rents are not crushingly high.

In the 1960s and 1970s, Chayanov's writings were translated into English, and his ideas found traction amongst agrarian sociologists, anthropologists, and geographers concerned with analysing the role of agrarian societies in the de-colonising post-Second World War and Cold War context. While this period saw a rejuvenation of Chayanov's ideas, it came with a recognition that many of his arguments were specific to the historical, political, cultural, and economic context of the Russian peasantry at the turn of the nineteenth century; he assumed the local homogeneity of the peasantry and within households; and the model may be inappropriate in contexts where, for example, there are low pressures on land and opportunities for off-farm employment (Hunt 1979; Bernstein 2009).

With these limitations in mind, the 'agrarian question' debate has changed over time. Akram-Lodhi & Kay (2010) identify seven different ways in which the contemporary agrarian question has been understood. Bernstein (2006) has argued that the concept of the 'agrarian question', at least in its classic sense, is no longer useful in the current period of globalisation and farmer livelihood diversification. Other related questions have emerged that decouple 'agrarian questions' from a specific historical or socio-political context, and instead relate to shifts in global value relations (McMichael 2013a). These include questions over the process and extent of globalised capitalism's ability to penetrate the agricultural sector.

Lewontin (1998) and Kloppenburg (2004) have explored the ways in which genetic engineering technologies enable capitalism to further penetrate agriculture through patenting germplasm, and through terminator technologies that are low yielding or infertile in the second generation (see Chapter 3). There has also been work on the 'neoliberalisation of nature' and the 'creation of new 'valued entities' through calculative practices that can be accounted for, costed, and circulated in monetised and financialised forms' (Nel 2017, p.81; Bakker 2004; Heynen & Robbins 2005; Castree 2003). Similarly, the accelerating scale and scope of land acquisition highlights the continuing rationale for studying 'agrarian questions': 'who got land, what land, how much land, and what they were able to do with it' and how it 'was contested along—and often followed—the contours of existing, typically intricate, structures of inequality in agrarian populations' in particular contexts (Bernstein 2006, p.453; Li 2014a).

With these debates in mind, McMichael (2013a) re-interprets 'agrarian questions' away from being centred on agrarian transition, and towards struggles over rights and alternative agrarianisms, for example though the food sovereignty movement. Agrarian questions that remain lively areas of debate today include the role of smallholder farmers within global agricultural value chains, and the implications of value chain integration for issues of control, access, and sovereignty over natural resources and market interactions.

3.2.1.2. 1970s and 1980s silent violence, moral economies, and indigenous knowledge

The 1970s and 1980s were a productive time in the broadly Marxist study of the dynamics of smallholder farming, the social relations of production, and the implications of the incorporation of farmers into globalising agricultural value chains (Neumann 2005). Scholars who wrote seminal texts in this period include Michael Watts, James Scott, Robert Chambers, and Paul Richards. These scholars took a critical approach to the consensus surrounding development as modernisation, and examined how rural communities experienced and reacted to the socio-ecological implications of incorporation into capitalist relations.

During this period, scholars unpacked the internal processes and relations of agrarian communities through the concept of 'moral economies'. The study of moral economies can be defined as examining the ways in which economic activity is influenced by moral-political norms and sentiments: 'who is morally bound to whom, and why' (Shipton 2010). Gotz (2015) discusses how the concept of a 'moral economy' emerged in the eighteenth century in tandem with the development of classical political economy, which detached considerations of morality from understandings of the economy by elevating productivity, growth, and self-interest as drivers of economic decision-making. A concerted effort to study moral economies occurred during the 1970s by Thompson (1971) and—importantly for geographers—Scott (1976), who exported the concept to the Global South in *The Moral Economy of the Peasant: rebellion and subsistence in Southeast Asia*. The concept of the 'moral economy' has been described as a 'beautiful example of transdisciplinary migration' as it has been employed in various ways by historians, political scientists, anthropologists, and geographers (Fassin (2009) quoted in Edelman 2012, p.59). The way in which I employ the concept is discussed later in this chapter.

For Thompson (1971), the moral economy is associated with 'confrontations in the marketplace', specifically between the norms, customary rights, and utopian aspirations embedded in pre-capitalist societies, and the encroaching capitalist principles as expressed, for instance, in eighteenth century English food riots over just prices for staple produce. Scott (1976) exported this analysis of the moral

economy overseas to Southeast Asia, focusing on producers rather than consumers, and encouraging deeper attention towards values. He outlined the moral economy of the peasant and its non-profit maximising subsistence ethic, as well as the tendency towards risk-aversion that is often taken for backwardness and irrationality. This perspective draws strongly on many of the ideas about smallholder farmers mentioned earlier in this chapter, for example those of Chayanov (see Edelman 2005 for a review). Scott goes further than Chayanov in taking into account not just the family unit, but also other social relations, for example village-based mutual support in times of poor harvest or environmental disruptions. The culture of redistributive obligation embedded in the moral economy of the peasant is, for Scott, in contrast to the neoclassical political economy model based on rational household decision-making and profit-maximisation. For both Thompson and Scott, individual and collective action is prompted when this moral economy is threatened.

In *Silent Violence: food, famine and peasantry in Northern Nigeria,* Watts (1983) looked at the impacts of external interventions by examining the relationship between drought and famine in Hausa communities in Northern Nigeria. He critiqued prevailing conceptualisations of smallholder farmers as individualist rational actors, and instead focused on socio-historical factors shaping knowledges, practices, and politics. He concluded that while drought was an ecological process, famine was inherently socio-political; vulnerability and marginalisation were produced at the intersection of colonial policies, market integration, the perpetuation of social inequality, and climatic disruptions (Watts 2015). In this way, Watts disrupted the conceptualisation of 'nature' and 'society' as discrete, theorising them instead as interconnected. Peasants were not vulnerable to drought due to inherent irrationality and ignorance, but due to the articulation of otherwise well-adapted communities within colonial capitalist relations, and then within development as modernisation narratives and policies. From this perspective, 'the tissues of the moral economy were stripped away, making peasants vulnerable to both market crises and a capricious climate' (Watts 1983, p.xxi). Famine was caused by 'the rupture of local systems as they become part of coherent and highly integrated global networks' (Watts 1983, p.14).

Another key thread that emerged in the 1970s–1980s is that of indigenous technical knowledge (see Horowitz 2015 for an overview). Scholars like Chambers (1983) in *Rural Development: putting the last first* and Richards (1985) in *Indigenous Agricultural Revolution: ecology and food production in West Africa* drew attention to how local land managers often possess deep practical knowledge about their environment that is accumulated through experience and passed down through the generations. This so-called indigenous knowledge is, however, usually ignored by policy makers and 'experts' (Chambers & Ghildyal 1985). Studies of indigenous knowledge also disrupted depictions of smallholder farmers as conservative and backward by drawing attention to indigenous forms of innovation. This led the likes of Chambers and Richards to call for greater collaboration and

participation between farmers and scientists to develop locally adapted agricultural practices and technologies. Some perspectives on indigenous knowledge and innovation have, however, been criticised for championing the local to such an extent that one hegemonic narrative has been replaced by another, and for ignoring the fact that indigenous knowledge is not held equally by all (Neumann 2005; Bebbington 1996). These studies highlight key questions concerning the appropriateness of externally constructed agricultural development programmes that do not take into account socially differentiated patterns of local indigenous knowledge and innovation.

3.2.1.3. Food regime analysis and 'world historical shifts'

While the literature discussed above mainly deals with national or local-scale examinations of the role of smallholder farmers in capitalist agri-food relations, food regime analysis looks to the global scale. Since its development in the 1980s, food regime analysis has been widely employed as a lens for comparative and historical investigations into the politico-economic and ecological relations of modern capitalism over the past century and a half. In its early form, food regime analysis drew heavily on structural Marxist political economy to link 'international relations of food production and consumption to forms of accumulation broadly distinguishing periods of capitalist transformation since 1870' (Friedmann & McMichael 1989, p.95). A food regime can be defined as a stable period of capital accumulation associated with a particular set of geopolitical relations. Food regimes are governed by rules that are normalised but contested, and when these implicit tensions become explicit and 'named' the food regime moves into a period of transition and experimentation (Friedmann 2005).

Food regime analysts have periodised the last century and a half into two food regimes, and a possible emergent third. The first food regime largely coincides with colonialisation from the 1870s to the end of the First World War. It was characterised by British hegemony and the production of cheap food in the colonies to fuel industrialisation, underpinned by the formation of a world price for staple grains. A second food regime has been identified from the 1950s to the 1970s, associated with US hegemony and the production of cheap foods through technology advancements rolled out in the Global South through the green revolution in the geopolitical Cold War context. These regimes are characterised by different conditions for achieving cheap food to enable the accumulation of power by different hegemonic actors.

Food regime analysis has faced criticism from a variety of angles. The likes of Goodman & Watts (1994) and Araghi (2003) question the periodisation drawn up by Friedman and McMichael. Goodman & Watts (1994) query the appropriateness of analysing agri-food relations using the same 'homogenising grand narrative' as that of industrial development. They argue for the exceptionalism

of agricultural production and consumption relations, meaning that agriculture deserves its own periodisation. Arahgi (2003), however, challenges Goodman and Watts for 'throwing the baby out with the bathwater' in forwarding agricultural particularism. Araghi instead focuses on a theory of value to draw up a periodisation with the aim of avoiding both 'abstract globalism' and 'abstract localism'.

The privileging of capitalism as an explanatory force in food regime analysis, and in global-scale political economy approaches more broadly, has also been challenged. McMichael (2013, p.96) himself recognises how food regime analysis tends to 'understate the social face of commodity relations on the ground'. Bernstein (2015) and Van der Ploeg (2009) lament that much food regime analysis avoids key questions like 'who are the peasants', and often leaves them without theoretical representation. Rather than being an external and inevitable ordering force, 'capitalism' is a 'globalised (yet historically specific) socio-spatial formation, and a lived praxis' (Ouma 2017, p.500; Gibson-Graham 1996). Additionally, Bernstein (2015) notes that although Friedmann (1993) recognises that agro-food corporations have heterogeneous interests, the food regime literature in general does not tend to investigate what these heterogeneous interests are, why they arise, and how some interests become dominant over others. Ways in which political economy approaches have been elaborated to overcome this critique are explored later in this chapter. These debates suggest an important research agenda regarding how global patterns of capitalism in agri-food relations touch down in particular places in particular ways, and the power relations, interests, motivations, interactions, and practices relating to how local forms of capitalism unfold.

3.2.1.4. Understanding recent changes in the agricultural sector

Political economists have taken up the task of attempting to understand recent shifts in agri-food systems, especially those surrounding the growing importance of neoliberal narratives and private sector actors and motivations. In this context, neoliberalism is taken to mean an ideal that market exchange should serve as a guide for human activities. It consists of a 'complex assemblage of ideological commitments, discursive representations, and institutional practices, all propagated by highly specific class alliances and organized at multiple geographical scales' (McCarthy & Prudham 2004, p.276). 'Neoliberalisation', therefore, refers to a set of reforms, practices, and ideological transformations that seek to facilitate and enhance the conditions for capital accumulation (Bakker 2015).

A widely cited perspective on recent trends in the agricultural sector is put forward by McMichael, who argues for the emergence of a new 'corporate food regime' (McMichael, 2005, 2009a, 2009b, 2012, 2013, 2016). This corporate food regime is characterised by the internalisation of neoliberal

market principles through privatisation and liberalisation, and the globalisation of these principles through the structural adjustment policies of the IMF and WB, and the trade policies of the World Trade Organisation. Mirroring trends in industry, in this food regime the market is hegemonic. Its main characteristics are the dominance of the price of food and its exchange value in the pursuit of corporate profits, and the corresponding appropriation of peasant agricultures, knowledges, and local ecologies through land grabs (Borras & Franco 2012; Daniel & Mittal 2009; Akram-Lodhi 2012; McMichael 2012; Vermeulen & Cotula 2010), biofuel production (Borras et al. 2010; Matondi et al. 2011; McMichael 2009a), genetic engineering (McAfee 2003; Leguizamon 2014), increasingly complex agricultural derivatives (Breger Bush 2012; Russi 2013), and the conversion of the Global South into a 'world farm' (McMichael 2005).

McMichael also devotes much time to discussing the rise of social movements as presenting an alternative 'politics of modernity rooted in a global moral eco-economy', such as the food sovereignty movement. Similarly, Van der Ploeg (2009) analyses processes of 'repeasantisation' as smallholder farmers assert their autonomy and control over natural resources and market interactions. For food regime theorists, these processes represent a 'new agrarian question' by exposing the central contradictory elements of the corporate food regime and its developmental narrative (McMichael 2013a, p.156; Holt-Gimenez & Altieri 2013; McMichael 2014; Martinez-Torres & Rosset 2014). Similar to early food regime literature, however, studies of the 'corporate food regime' have been critiqued for flattening differences between and within 'farming populations', especially in terms of gender and class power relations, in terms of market relations, and between and within the North and the South (Bernstein 2009)

In the wake of the financial crisis and food price hikes in the late 2000s, political economists have begun to explore the financialisation of the agri-food sector, as introduced in Chapter 2 (McMichael 2013a; Burch & Lawrence 2009; Clapp 2014). Financialisation in agriculture is occurring through financial actors like hedge funds and private equity firms opening up new profit frontiers in the agri-food system (Daniel 2012), but also through agri-food actors adopting financial models and motivations, as illustrated by supermarkets engaging in banking (Burch & Lawrence 2009). In this financialised food regime, the central hegemonic force is the reconstitution of the value of food, ecosystems, and livelihoods as tradable commodities, 'with a view to include it in different assemblages from which the enduring extraction of financial profit can be sustained' (Russi 2013, p.82). The result is the increasingly speculative nature of the agri-food system.

Clapp (2014) draws attention to 'distancing' between production and consumption decisions in financialised agri-food relations. Distancing is caused by increases in the number and type of actors involved in agri-food value chains, and the simultaneous centralisation of power and control over-

decision making among a smaller number of actors. It involves increased geographic distance from farm to plate, as well as numerous and more complex relationships serving to 'obscure the role that financial actors play in the food system, making it difficult to link them to the social and ecological consequences of financial investment activities on the ground' (Clapp 2014, p.798). Williams (2014, p.402), however, reminds us that:

> *'the financialization of food must be framed as a shifting set of practices, logics and devices through which agriculture has been reconfigured as a particular type of financial space. This is less a question of the growing role of finance, or of its greater influence over agriculture, and more of financialization as a process, as a form of work itself, and of its contributions to the reworking of agriculture as a distinct field of engagement.'*

How to achieve this more nuanced approach to the relationship between finance and farming is the subject of the rest of this chapter.

3.3. Political ecology

While political economists of agri-food relations like Friedmann (1992, p.372) may posit that 'the dominant tendency [in global agri-food capitalist relations] is towards distance and durability, the suppression of particularities of time and place in both agriculture and diets', I argue that the way in which forms of capitalism unfold in particular places and times, and in relation to particular commodities, cannot be assumed. To understand and investigate this, a political ecology perspective is useful.

Political ecology emerged as a loose collective of researchers and texts in the 1980s, and has been defined as 'a confluence between ecologically rooted social science and the principles of political economy' (Peet & Watts 1996, p.6). Early political ecology drew heavily on Marxist political economy, and it maintains a critical dialogue with the theoretical perspectives mentioned thus far. Its aim was, and still is, to challenge and deconstruct apolitical accounts of human-environment interactions, for example those based on Malthusianism and modernisation narratives. Political ecology also aims to provide alternative, more nuanced approaches concerned with marginalisation, access and control, identity, and environmental degradation and conflict, as well as the interplay between them. Political ecology can therefore work as both a 'hatchet' and a 'seed' (Robbins 2004, pp.12–13).

Over time the field has broadened to take into account post-structuralist perspectives and alternative considerations of the role of materialities. Political ecologists draw on a mix of theories and methods to examine key questions of power and resource use. It can therefore be described as a 'community of practice' or the 'spine' of an approach, rather than a coherent theoretical approach (Robbins 2004; Blaikie 1989, p.27). According to Robbins (2012, p.13), it is something that people 'do'. Bridge et al. (2015, pp.7–8) argue that despite this diversity, political ecologists are united by a set of commitments: a theoretical commitment to critical social theory; a methodological commitment to in-depth, participatory, mixed methods, and multi-scalar research; and a political commitment to social justice and structural political change. Taking a broadly political ecological approach emphasises cultural and historical context, power and politics, multi-scalar processes, heterogeneity, and materiality that are lacking in some of the political economy approaches previously discussed. This section examines early political ecology, before exploring recent elaborations.

3.3.1. Early political ecology

For early pioneers Blaikie & Brookfield (1987, p.17), political ecology 'encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself'. Political ecology emerged out of a fusion of cultural ecology and Marxist political economy, resulting in the stance that the 'human transformation of natural ecosystems cannot be understood without consideration of political and economic structures and institutions within which the transformations are embedded' (Neumann 2005, p.9). This builds on the work in the 1970s and 1980s by the likes of Watts, Scott, Richards, and Chambers (see Section 3.2.1.2.). For political ecologists, environmental degradation is a symptom, cause, and result of underdevelopment. Scholars traced the social relations of production, the nature of the state, and perceptions and rationalities of various actors at different spatial scales (Robbins 2004).

Complex and multi-scalar issues are analysed by early political ecologists through the 'chain of explanation' framework, as developed by Blaikie & Brookfield (1987) in their work on agriculture and soil erosion. This is 'a mode of explanation that evaluates the influence of variables acting at a number of scales, each nested within another, with local decisions influenced by regional policies, which are in turn directed by global politics and economics' (Robbins 2004, p.504). It entails focusing firstly on the land manager and place-based factors at the local scale, and then tracing explanatory factors upwards through nested regional and national scales to the global scale. It also involves a historical element, with explanatory factors followed through time. These explanatory links are not necessarily linear (Blaikie & Brookfield 1987). The chain of explanation approach involves taking into account that livelihood decisions are constrained by 'parameters of choice' that are themselves shaped by broader social, cultural, economic, political, and ecological actors and processes, and are

operating under particular power relations (Robbins 2004; Blaikie & Brookfield 1987). Blaikie (1985), for example, explores how and why rural people make land use decisions leading to soil erosion. He concludes that 'soil degradation and erosion can be explained in terms of surplus extraction through the social relations of production and in the sphere of exchange' (Blaikie 1985, p.124).

While this chain of explanation approach is useful for drawing attention to processes occurring at multiple scales, it has been challenged (Robbins & Bishop 2008). Critics argue that it relies on abstract, hierarchical, and pre-given socio-spatial levels and containers like 'the state', 'the corporation', and 'the household', and can lead to problematic causal connections being drawn between the global and the local (Rangan & Kull 2008; Goldman & Turner 2011; Zimmerer 2000; Watts & Scales 2015). Sayre (2015, p.505), for instance, questions 'what if scales aren't discrete, but fluid, overlapping, and mutually constitutive?' Heynen & Robbins (2005) argue that through the chain of explanation approach, neoliberal capitalism is sometimes fetishised and presented as a monolithic, inevitable, and undifferentiated 'up there' force shaping processes 'down here' at the local level. On the contrary, the incorporation of both rural people and natures has been uneven and contested. Alternative approaches to multi-scalar analysis, for example based on networks and assemblages, will be discussed later in this chapter.

3.3.2. New approaches in political ecology: embracing the cultural and material turns

Over the past two decades new approaches to political ecology have emerged that build on these early structural Marxist accounts. Political ecologists have drawn on the works of an eclectic range of scholars, and the field of study has also broadened to go beyond binaries of North/South and rural/ urban (e.g. Neo & Pow 2015; Gabriel 2014; Heynen et al. 2006). All the while, political ecology has retained a focus on marginalisation, power and politics, and why people do what they do. In this section, I tease out three themes within these new approaches to political ecology: the narrative turn, feminist political ecologies, and post-human, network, and assemblage approaches.

3.3.2.1. Narrative turn

From the 1990s, political ecology—as with many geographical theoretical paradigms—has been influenced by the 'cultural turn'. Poststructuralist influences have led political ecologists to ask deeper questions about power and representation, which has involved an engagement with deconstructing discourses and narratives (Peet & Watts 1996; Goldman & Turner 2011; Robbins 2004; Leach & Mearns 1996). These are thorny terms to define, and tend to be used interchangeably although they

have slightly different meanings. A discourse is a way of seeing and understanding the world; a framework that 'emphasises some concepts at the expense of others' (Peet & Watts 1996, p.14). It 'determines what can be thought and said' (Escobar 1995, p.40). A 'narrative' is one element of a discourse, and can be defined as story telling, or 'a representation of a particular situation or process in such a way as to reflect or conform to an overarching set of aims or values'.[7]

Swift (1996), for example, deconstructs a narrative that blames smallholder farmers' land use choices for causing desertification. This, he argues, has stifled effective policy responses to very real problems of soil erosion in places like the Sahel. Similarly, Handy (2009) takes a historical perspective in analysing the tendency of policy-makers and planners to describe smallholder farmers as backward, uncivilised, unable to control their sexual urges, lazy, inefficient, prone to rebellion, and a barrier to agricultural development. Handy discusses how these representations are based on faulty understandings of farmer livelihoods, and serve to rationalise and justify socio-economic policies displacing farmers from their land. These examples demonstrate how livelihoods and environments can be represented and perceived in very different ways: 'knowing nature is a complex, multiple, and highly political process' (Goldman & Turner 2011, p.1).

While viewing representations as socially produced serves to overcome discrete conceptualisations of nature and society, it opens up ontological questions about the existence of an 'environment' beyond human perception. This has prompted a debate over the balance between the 'political' and the 'ecological'. Bryant (1991) and Peet & Watts (1996) stress the need to put politics first, and Swyngedouw (2015) argues for a deeper theorisation of what actually is meant by the 'political', especially in light of the depoliticisation of environmental matters like climate change. On the other hand, Vayda & Walters (1999) and Walker (2005) lament the lack of focus on ecological science. This has led to calls for political ecologists to 'take scientific evidence seriously and at the same time to question its technical basis and political use' (Blaikie 1995, p.208), and to address the 'ecological and the political dimensions of environmental issues in a more balanced and integrated manner' (Zimmerer & Bassett 2003, p.1). Political ecologists have attempted to achieve this through critical realism. Critical realism takes a stance of 'constrained constructivism' by positing that there is an environmental reality, but our understanding is always mediated by our interaction with it (Hayles 1995). In other words, this involves starting 'from the premise that the world exists independently of our knowledge of it and that very independence means that human knowledge is not itself a reality, but a representation of it' (Neumann 2005, pp.9–10).

[7] https://en.oxforddictionaries.com/definition/narrative.

3.3.2.2. Feminist political ecologies

Feminist geographies have influenced political ecology in two main ways. Firstly, feminist geographers have stressed themes of intersectionality, the social construction of identity, and the role it plays in human-environment interactions. Nightingale (2006), Carney (1993) and Lau & Scales (2016), for example, have exposed how indigenous knowledge is differentially held and contested both within communities and within households, including along lines of ethnicity, gender, age, and class. This perspective encourages political ecologists to examine internal power relations, and disrupt assumptions of households as discrete and coherent units of production, consumption, and investment. Feminist geographers have also highlighted the existence of 'gendered environmental rights of control and access as well as responsibilities to procure and manage resources for the household and the community' (Rocheleau et al. 1996, p.10). This introduces a focus on gendered property and resource rights (MacKenzie 1998); gendered access to employment (Carney & Watts 1990); gendered spaces (Mehta 1996); gendered impacts of development projects (Schroeder 1999); and gendered environmental politics and grassroots activism (Rocheleau et al. 1996; Elmhirst 2015).

Secondly, feminist poststructuralists like Rocheleau and Haraway have critiqued the conception of 'objective' and 'rational' scientific knowledge (Rocheleau et al. 1996). In doing so, they emphasise the importance of discourse, representation, and imagery in the identification and framing of environmental problems and their solutions. Instead of assuming objectivity and rationality, they focus on how knowledge is situated, embodied, and partial (Haraway 1988). According to Neumann (2005), this provides political ecology with the tools to critically investigate the knowledge claims of a range of actors that include local land managers, scientists, and government officials.

3.3.2.3. Post-human geographies, networks, rhizomes, assemblages

Political ecologists have begun to play with ideas that take further the role of the ecological in human-environment relations, and at the same time re-imagine multi-scalar politics. This is emerging through engagements with the so-called 'new materialism', and a variety of scalar concepts including 'networks, roots, rhizomatic and territorial ideas and methods' (Rocheleau 2015, p.71). These conceptualisations 'move beyond notions of 'regimes', 'spaces' and 'chains' which provide a sense of scale without the requisite depth and dimension' (Williams 2014, p.408). While conceptualisations of 'networks' have long been employed by geographers (e.g. Castells 1996), new approaches building on actor-network theory (ANT) and assemblage thinking take multi-scalar and post-human analysis in new directions (Muller & Schurr 2016). This focus on networks, assemblages, roots, and rhizomes reflects on-going evolution within the social sciences, and partly relates to recognition of shifting nodes of power within the increasingly globalised world (Bebbington & Batterbury 2001).

ANT has emerged from science and technology studies, and is shaped by the works of Latour (2005), Callon (1986), and Law (2004), amongst others. ANT is characterised by internal diversity, and (like political ecology) is more of a methodological approach than a theory. Its broad themes and concepts make two major contributions towards re-theorising political ecology. Firstly, it provides a means of going beyond the limitations of the 'chain of explanation' approach, which locates causal power in an upwards-hierarchical framework. Instead, ANT presents a horizontal ontology through a 'comparative anatomy of networks' (Robbins 2004, p.212). ANT research methodology is centred on tracing associations that make up the network, while avoiding *a priori* assumptions of where those associations may lead. It encourages the study of how different actors are enrolled into the network, how alliances are formed and performed, and what happens when those alliances are disrupted.

Secondly, ANT encourages a focus on the role of non-human actors within these networks, for example the role of soil, microbes, and laboratories in the production process (Robbins 2007; Bennett 2009). Instead of being 'relegated to material processes', as in much of early political ecology, ANT provides a roadmap to assert more active roles for non-humans (Robbins & Bishop 2008, p.750). Nonhumans are enrolled to stabilise relations, as they 'last longer than the interactions that form them', and they also play an active role as mediators of those relations and in shaping their outcomes (Sayes 2014; Callon & Latour 1981, p.283). For Braun (2015, p.106), this focus on the difference that matter makes plays a role in 'expanding the ways in which a situation is able to affect its participants, and in doing so, generate new ideas, new powers, and perhaps new possibilities for composing socio-ecological assemblages otherwise'.

Theorists have found opportunities to employ an ANT approach, while retaining an inherently political ecological focus on historical context, marginalisation, access, control, and conflict (Robbins 2004; Watts & Scales 2015; Castree 2002; Whatmore & Thorne 1997; Swyngedouw 1999). As Whatmore (1999) explains, 'I do not think that one can, or ought to, look to ANT to provide some sort of ready-made compass. None the less, there are useful beginnings here'. It shapes the types of questions asked, and encourages researchers to unpack categories and assumptions that tend to be taken for granted. With this in mind, ANT is inherently political as it is concerned with 'the act of questioning the boundaries of apparent individual things or the fixedness of certain kinds of sets' (Rocheleau 2015, p.76). Robbins (2007), for instance, draws on network thinking in his work on lawn politics to show how non-humans, for example irrigation systems, grass seeds, and pesticides, can 'push back' and shape interactions with the 'lawn people' maintaining the grass. Rocheleau (2015) also takes a network approach to studying environmental social movements, how they stretch alliances across space and time, how certain nodes develop, and how they translate their mandate in order to create convergences and enrol new actors. This approach encouraged her to consider various forms of power (Rocheleau 2015, pp.83–84):

> *'Looking at the complex relationships of people within and between organizations and institutions, we can speak of power between, power alongside, power in spite of, power from within, and power from without and power in convergence. The power to connect or disconnect, to prune one's network or end relations with another, revolves around often uneven terms of connection and quality of relations. Connections can be positive, negative or neutral, and voluntary, involuntary or externally coerced by a third party. Relations can be based on dependence, independence and interdependence.'*

While some political ecologists have grappled with the often opaque ANT literature and found useful themes, others have criticised it for flattening differentials of power and politics, the study of which forms a core commitment of political ecology (Lave 2015; Castree 2002). I began this research with the aim of employing an ANT influenced political ecology approach (see Watts and Scales 2015). During my fieldwork, however, I realised that I was attempting to fit what I observed during my fieldwork into the vocabulary and networked analytical concepts of ANT, rather than it enriching my understanding of those events. I therefore looked elsewhere for theoretical inspiration, as ANT is 'by no means the only way to re-embrace the material in geography' (Robbins & Marks 2009, p.192). As a result, I turned to a related approach that also introduces novel conceptions of multi-scalar analysis and post-human geographies: assemblage thinking. This has been embraced by a wider audience within political ecology as it has been understood as more fluid and less prescriptive than ANT, for example it allows for identities and relationships that are unmediated by the network/assemblage (Muller 2015; Anderson et al. 2012; Muller & Schurr 2016). The following section discusses how drawing influences from assemblage thinking into political ecology has influenced this thesis, as well as the analytical themes that emerged.

3.4. A political ecology assemblage approach to studying smallholder farming

Influenced by the writings of Deleuze & Guattari (1977) and De Landa (2006), amongst others, assemblage thinking has become popular in geographic thought. An assemblage is 'a mode of ordering heterogeneous entities so that they work together for a certain time' (Muller 2015, p.28). In other words, 'the on-going labour of bringing disparate elements together and forging connections between them' (Li 2007a, p.263). The study of assemblages is 'concerned with why orders emerge in particular ways, how they hold together, somewhat precariously, how they reach across or mould space and how they fall apart' (Muller 2015, p.27). Studying assemblages can bring to light 'a

specific historical, political, and economic conjuncture in which an issue becomes a problem' (Ong & Collier 2008). To these considerations I would also add an ecological dimension.

Assemblages are relational in that they are an arrangement of different entities interacting to form a new whole, and performative as the whole is contingent and can be shaped by any of the actors (Muller 2015; Muller & Schurr 2016). Assemblages have a particular temporality and spatiality, as diverse elements are drawn together in ways that are dynamic and contingent, and thus necessitate multi-scalar study (Ogden et al. 2013). This perspective encourages us not to take relationships, motivations, and outcomes for granted, but instead trace *how* associations are constructed and contested. In this way, assemblage thinking is fundamentally political; it brings us 'face to face not with the essences of things, but with questions of power, ethics, and politics' (Braun 2006, p.206; Nail 2017).

Taking an assemblage approach has implications for conducting empirical research. Rather than acting a model for relationships, or a method of theorising them, I employ the concept of assemblages as an active verb: assemblage thinking provides a means of analytically conceptualising how disparate actors interact, hold together, and are disrupted. While the chain of explanation approach has been critiqued for relying on a hierarchical and arbitrary treatment of scale and taken-for-granted socio-spatial containers, and weak theorisation of how causal factors at different scales influence each other, assemblage thinking guides the research agenda by encouraging questions about how relevant actors are enrolled, how things are rendered visible and invisible, how contestations occur, and how relationships fall apart and are rebuilt. It enables a more flexible conceptualisation of relationships based on these 'how' questions, rather than *a priori* assuming vertical links from the local to the national and the global. Rather than standing in opposition to the chain of explanation approach in political ecology, assemblage thinking builds on it by enabling an openness to additional dimensions of analysis, rather than standing in opposition. I found this approach useful in the context of my case study material, which involves increasingly globalised, financialised, and distanced agri-food relations that stretch across space and time to draw together diverse and often disparate actors through complex power relations. I return to the usefulness of assemblage thinking in relation to my case study in concluding Section 9.3.

Within this political ecology approach influenced by assemblage thinking, three major analytical themes can be traced through this thesis. These relate to power, moral economies, and socio-material entities.

3.4.1. Power: discursive, disciplinary, and institutional

An approach drawing on assemblage thinking provides a lens to 'unpack the mechanisms and processes through which capitalist relations are enacted in specific contexts (rather than assuming that they exist *a priori* or that they take some universal, transhistorical shape)' (Ouma 2016a). I theorise agricultural development programmes as intricate assemblages involving a range of actors, discourses and narratives, practices, and institutions. Unpacking these assemblages necessitates the examination of power relations. This thesis engages with issues of power in three intersecting ways: discursive, disciplinary, and institutional.

As discussed in Section 3.3.2.1., political ecologists have embraced a social constructivist perspective positing that ways of understanding the world are subjective and socially constructed. Scholars have worked to disrupt discourses and narratives about rural people and the environments in which they live, and to expose alternative ways of understanding and being. Examples include critiques of narratives surrounding abundant unused land in Africa, or ignorant smallholder farmers causing environmental degradation (Leach & Mearns 1996; Mortimore 1998; Netting 1993). As well as deconstructing superimposed narratives, political ecologists have empirically explored and unpacked knowledges, innovations, and rationales behind why smallholders do what they do, for example in terms of livelihoods, resource use, and innovation (Scoones 2009; Bryceson 2002; Chambers & Conway 1992). Analysis of discourses and narratives enables an appreciation of how different actors understand and represent the same context or issue, and why disagreements may result. I employ the analysis of discursive power to understand how social impact investors tell stories about smallholder farmers, how they diagnose and frame the problem of and solution to agricultural development, how these narratives and discourses travel and are translated in the Tanzanian context, and how they complement or clash with farmer livelihoods in Tanzania.

To understand how adherence to one narrative or discourse is enforced over others, I employ the concept of discipline. This approach draws on the work of Foucault and Gramsci to examine the ways in which people govern themselves and each other to correct or improve through examination, classification, registration, formalisation, and normalisation. In other words, discipline is a process through which 'new norms are established, and their implementation monitored' (DuBois 1991). Political ecologists like Li (2007) and Escobar (1984) have explored how the development industry has problematised development challenges, disciplined development subjects, and authorised certain forms of knowledge, mindsets, norms, and behaviours over others. This often involves 'rendering technical' the cause, problem, and solution in order to depoliticise it, make it legible to a particular audience, and define its boundaries (Li 2016; Rose 1999; Ferguson 1990; Scott 1998). To 'render technical' is to delineate 'the domain to be governed as an intelligible field with specifiable limits and particular characteristics… defining boundaries, rendering that within them visible, assembling

information about that which is included and devising techniques to mobilize the forces and entities thus revealed' (Rose 1999, p.33). Li (2014b), for instance, discusses how risk in land deals can be enrolled into the farmland investment assemblage as long as it can be identified and calculated, thus rendering it technical. During my research, a focus on disciplinary power opened up questions surrounding how social impact investors like Cheetah Development attempt to 'render technical' agricultural development in Tanzania, and how they discipline farmers to adhere to their vision of commercial maize farming by affecting mindset and behaviour changes.

Discursive and disciplinary power are effected and solidified through certain social systems, practices, and institutions (Robbins 2004, p.66). Carrier & Miller (1998) highlight the increasing 'virtualism' of the political economic system, and how economics is now the standard against which the world is measured, found wanting, and made to conform. They discuss how organisations like the IMF and the WB, as well as national governments, the private sector, and civil society have condemned local social and cultural arrangements as irrational in comparison to the standard of Western economics. Structural adjustment conditionalities discipline countries by legitimising the withholding of loans if conditions are not met. Li (2016, 2007) discusses how development projects often have an explicit purpose to 'improve' the behaviour or mindset of development subjects, both in terms of development staff and intended 'beneficiaries'. She explains that 'the project system does not have hard edges, but you know it is in place when people concerned with rural development are thinking and acting in its terms, without serious consideration of alternatives, which seem to be unworkable, undesirable, or just off the map' (Li 2016, p.80). Similarly, Fairbairn et al. (2014) give the example of debt in agrarian relations, and how it can function as a mechanism for the diffusion and implementation of capitalist cultural practices and rationalities, while also serving to break down social solidarity and enhance environmental degradation. In the context of this research, I explored how discursive and disciplinary power were entrenched and enforced by Cheetah Development in the Lower Kilolo District of Tanzania through particular institutional arrangements and relationships.

Understanding power as diffuse and circulating, rather than an inherent characteristic, means that the possibilities of resistance, refusal, and the promotion of alternatives are always present. The ways in which resistance is manifested depends on the socio-historical, environmental, and economic context that delineates power relations. Scott (1987, 1990, 1976) discusses a range of resistance tactics, from 'weapons of the weak' to outright rebellion, through which marginalised peoples contest efforts to discipline them to adhere to a particular moral economy. Resistance can take the form of practices that are sometimes intentional, and sometimes inadvertent while trying to 'get by'. Development projects may also be intentionally adapted and repurposed by different actors, or there may be unexpected outcomes due to unanticipated effects and conjunctures. In other words, projects that fail to do one thing may succeed at doing something else (Ferguson 1990).

Following Robbins (2004, p.191), this thesis therefore pays attention to 'the material details that make up livelihoods… and the ways those specific material conditions present limits and opportunities for groups as they organize, struggle, and seek to define themselves and their way of life'. I analyse how smallholder farmers 'pushed back' against the discursive, disciplinary, and institutional power exerted by Cheetah Development, and how this resistance took 'everyday' forms of protecting livelihoods, moral economies, and means of getting by. I go beyond judging development projects on their success or failure to achieve stated aims by empirically examining how discursive, disciplinary, and institutional powers interact to produce unexpected impacts.

3.4.2. Culture: moral economies

Another key theme in this thesis is the contextualisation of political economic relations and ethical commitments through considerations of culture: 'culture is important to understanding the ways in which people shape money for themselves, bending it to their own purposes and resisting its capacity to homogenize everything it touches' (Dodd 2014, p.269). I employ the concept of the 'moral economy' by building on the work of Scott that was discussed in Section 3.2.1.2. Theorists have gone beyond simplistic understandings of the moral economy as something that existed in pre-capitalist societies and is eroded by the penetration of capitalism (Ogawa 2006; Sayer 2000; Sayer 2001; Edelman 2005; see Booth 1994 for critique of early moral economy analyses). Sayer (2000) highlights that examining moral economies forms an important analytical mode of investigation, rather than simply drawing normative statements about particular social relations in history. Moral economies are the 'expression of and production of a social group's explicitly normative frameworks outlining the 'proper' organization of society and division of (what are perceived to be) scarce resources' (Wolford 2005, p.245).

Analysing moral economies encourages us to examine the means and ends of economic activity, subjective claims to objective resources (Wolford 2005); norms surrounding entitlements and how these link to capabilities (the power and ability to do something) (Sen 1982); how assemblages of norms and behaviours may clash; and power relations that dictate the outcomes of these clashes. According to Sayer (2000), a sensitivity to moral economies invites us to ask important questions like what economic activities are for, how responsibilities are allocated, what things can be commodified, and how people behave when their moral economy is disrupted or threatened.

From this broader perspective, the framework of morals, norms, and values that underpin mainstream neoliberal capitalist relations can also be analysed. These are often formalised, normalised, and taken for granted, leading to underlying assumptions being obscured. This provides a vantage point from

which to politicise and analyse moments where divergent perspectives on 'moral' or 'ethical' socio-economic relations meet, and subsequent clashes between the value-laden and historically situated claims that they entail (Wolford 2005). Goodman (2004, p.893), for example, examines the role of standards in the Fair Trade movement, and its attempts to construct an alternative form of ethical capitalism that operates both 'in and against the market'. In a different context, Wolford (2005) has discussed the clashing perspectives on moral socio-economic relations of the agrarian elite and the Landless Workers Movement in Brazil.

A consideration of moral economies is particularly relevant when dealing with relations of investment and debt, as I do in this thesis. While debt is typically understood as a financial interaction, it is also fundamentally a socially and historically situated moral relationship (Dodd 2014; Graeber 2014). Debt can therefore be understood as a contradiction between and within moral economies and forms of 'ethical capitalism'. In some cases debt is 'socially sanctioned', such as in venture capital investment, while in other cases, for example an individual defaulting on a mortgage repayment, it is 'a perversion or deviation in human relations—an abnormal situation that needs to be rectified' (Roitman 2003, p.212). The moral relationship of debt has a distinct temporality both in terms of the timeframe of repayment, but also in 'foreclosure of the future'[8], as default often acts as a form of 'moral downgrading' that limits the debtor's chances of accessing future loans (Fourcade et al. 2013).

Although the financial language of debt is ostensibly objective and technical, it is often underwritten by the 'symbolic violence' of normative assumptions and judgements, particularly around responsibilities and obligations (Bourdieu 1984). According to Fourcade et al. (2013, p.22) 'nowhere is the entanglement between social position, economic worth, and moral worth more obvious than in the case of debt, where the economic standing and character of borrowers are simultaneously constituted as the precondition for the economic relationship and as its essential stake'. Moral dilemmas surrounding debt has led to certain forms, for example usury, being forbidden in particular places, times, and societies (De Landa 2000; Shipton 2010). Ultimately, 'debt both supports and is reinforced by a moral economy that is often used to justify the social, economic, and political asymmetries of power that exist between creditors and debtors' (Dodd 2014, p.136).

In this thesis, I employ the study of moral economies in two ways. Firstly, I examine moral economies as normative narratives about just and equitable socio-economic relations; I explore statements made by different actors about how socio-economic relationships should be constructed. I examine on the one hand, how social impact investors perceive 'ethical capitalism', and on the other how smallholder farmers construct their moral economy. Secondly, I unpack these assumptions about socio-economic

[8] David Harvey's featured lecture, 'Marx, capital and the madness of economic reason', Association of American Geographers Annual Conference, Boston, 4/08/2017.

relations to explore how they are constructed and by whom; what norms, values, discourses, narratives, relations and practices they are constituted by; and what happens when they clash.

3.4.3. Socio-material entities

Assemblages involve relationships between heterogeneous technologies, metrics, and resources. Studying assemblages therefore involves examining the processes by which socio-material entities are enrolled into the assemblage, and the productive roles that they play within it (Braun 2015). I draw attention to the role of socio-material entities in two ways.

Firstly, inspired by political ecologists and anthropologists I examine the ways in which 'things' can have complex 'biographies', and can acquire multiple different valuations depending on the subject-object relations into which they are enrolled. Commodities, for instance, are merely 'things in a certain situation' with the potential to translate into different modalities of value (Appadurai 1986, p.13; Gilbert 2005). This perspective goes beyond simplistic economic valuations to recognise non-monetary claims to commodities, how these are constructed and prioritised, and what happens when valuations clash (Cameron & Gibson-Graham 2003). This involves unpacking often-reified categories like land, money, and agricultural commodities to tease out the spheres of value through which they are understood in particular times and places (Appadurai 1986). The ways in which socio-material entities are valued and enrolled into assemblages also focuses analysis on questions of power, as the 'process of inventing alternative visions of the future and innovative ways of achieving other possible worlds through the assemblage of resources from close by and far away is, in itself, power-laden and political' (McCann 2011, p.144).

Shipton (1989, 2010), for instance, explores impacts of the revaluation of certain commodities for the livelihoods of Luo farmers in Kenya, and how commodities can become enrolled in assemblages imbued with political and cultural meanings and motivations, as well as economic. He analyses how the exchange of land and tobacco is forbidden amongst the Luo, based on their perceived connection with major political, social, and economic changes and the impacts of those changes for everyday life, for example gender relations. Money that is obtained through these forbidden exchanges is considered 'bitter money', and is thought to be unproductive and even dangerous. For development practitioners, tobacco and land can be enrolled into capitalist assemblages, but for the Luo farmers these socio-material entities should not be commodified.

Secondly, tracing socio-material entities is useful in understanding multi-scalar and multi-sited processes and relationships within assemblages. This complicates linear conceptions of hierarchical scales. Socio-material entities work to draw together and stabilise disparate places and times to enable

'acting at a distance', but also can work to destabilise and disrupt relationships (Li 2014b). This is particularly pertinent in today's globalised and increasingly financialised agri-food system that draws together multiple and diverse actors through 'spatially far flung collaborations and interconnections' (Ong & Collier 2008; Tsing 2005, p.ix).

Li (2014a) asks the question 'what is land?' by investigating how various actors, including tax collectors, farmers, and investors, assemble land and afford it value in different ways to achieve different ends. These uses and values are not stable and can be the subject of conflict. For Li (2014b, p.590), 'adopting the analytic of assemblage enables me to tease apart the elements that make sure large-scale investments thinkable, and the practices through which relevant actors are enrolled'. She discusses how statistical depictions of 'yield gaps' are enrolled by investors to enable new ways of thinking of land as a thing that is 'underutilised', with huge potential for both profits and local employment generation if a certain amount of capital is invested. These inscription devices render certain things visible while obscuring others, allowing for land to be 'manipulated at a distance', such as through sale, as well as through 'demanding presence on the ground', for instance through changing land use patterns (Li 2014b).

Another example is the literature on credit scoring, and the role of forms and algorithms in assemblages that assess potential borrowers against normative financial expectations, categorise them, and then use this categorisation in disciplining processes. From this perspective, the process of credit assessment and scoring formalises subjective and moralised judgements into objective facts, through their 'rendering technical' and abstraction through the use of particular terminologies and codification on paper (Poon 2007; Burton 2012; Li 2007b).

In relation to my case study, focusing on the role of socio-material entities encouraged me to examine the complex biographies of maize and money, and to examine how different actors put them to work in different ways. I also examine the role of credit assessment forms in stabilising assemblage relationships between smallholder farmers, Cheetah Development, and the banks, and the work of rats to disrupt relationships between Cheetah and participating farmers.

3.5. Summary

This chapter has explored the theoretical influences on the approach taken in this thesis: a political ecology approach drawing on the concept of assemblages. My research is situated in political ecology as it encourages a focus on issues of power, access, and control; a commitment to multi-scalar and participatory research; and sensitivity to social justice and marginalisation. I draw on assemblage

thinking to empirically study how heterogeneous actors involved in social impact investing interact, hold together (however temporarily), are disrupted, and fall apart or are reassembled.

Within this approach I employ three analytical themes: discursive, disciplinary, and institutional power; culture through moral economies; and the role of socio-material entities. By focusing on culture through moral economies I examine how particular actors and groups shape their normative conception of moral and ethical socio-economic relations, and explore the norms, flows, practices, and relations that constitute them. I also focus on what happens when perspectives of ethical capitalism held by social impact investors interact with the moral economies of smallholder farmers. Studying discursive, disciplinary, and institutional power relations enables me to understand how different actors and groups attempt to implement their vision of ethical capitalism, and how resistance occurs through everyday means of 'getting by' as well as overt opposition. Finally, I discuss the role of socio-material entities, and the significance of how they move (or not) between different spheres of value, and can work to stabilise or disrupt assemblage relations. Looking at socio-material entities encourages the asking of 'how' questions that focus on the process by which assemblages emerge and fall apart.

With this analytical framework in mind, it is now possible to elaborate on the research objective and research questions. The overall research objective is to explore how social impact investing (SII) and its assumptions and models of agricultural development interact with smallholder farming in the Lower Kilolo District of Tanzania. I unpack how the concept of SII takes shape, how it is translated into the Tanzanian context, and how it interacts with farmer livelihoods in Lower Kilolo.

The specific research questions are:

A. How is SII in African agriculture emerging?
- What is driving SII?
- Who are the social impact investors, and what are their motivations?
- How is 'social impact' defined and measured?
- How is African agriculture being constructed as a site for investment?

B. How is social impact investing translated in the Tanzanian context?
- How do different actors translate SII into the Tanzanian context?
- How does Cheetah Development assemble itself as a social impact investor?
- How does Cheetah Development diagnose the problem of agricultural development in Iringa Region, and what model do they pose as a solution?
- How is this model underpinned by discursive, disciplinary, and institutional power relations?

C. **How do smallholder farmers assemble their livelihoods in the Lower Kilolo District of Tanzania?**
    - What livelihood activities do farmers conduct and why?
    - How do farmers engage with finance?
    - What moral economic relations underpin these livelihood activities?

D. **How does the Cheetah Development model unfold when it meets the messy realities of farmer livelihoods in Lower Kilolo?**
    - How did the Cheetah assemblage fall apart in the context of environmental disruptions in 2014-2015?
    - How did Cheetah attempt to enforce its model using discursive, disciplinary, and institutional power?
    - How did the 'ethical capitalism' of the Cheetah model clash with farmer livelihoods and moral economies?

4. Methodological Design

4.1. Introduction

Neither political ecology nor assemblage thinking dictates that a particular set of methods must be used, but both encourage a participatory, mixed methods, and multi-scalar approach. Consequently, I employed a combination of mainly qualitative and multi-sited ethnographic methods to explore my research objectives.

This chapter firstly details some procedures surrounding research in Tanzania. The methods used will then be discussed. These are grouped into research with smallholder farmers in Lower Kilolo, research with Cheetah Development, and research with key informants in the broader agricultural development and social impact investing (SII) sectors. I explore the process of document analysis and coding, before introducing some issues of translation and positionality. Full lists of interviews, focus group meetings, and participant observation sessions, as well as sample topic guides and the key informant consent form can be found in the Appendices.

4.1. Conducting research in Tanzania

I first visited Iringa from 21st January to 5th February 2015 to investigate research opportunities and to make initial contacts. I returned for the first fieldwork period from 1st July to 18th December 2015, and for the second from 12th July to 1st October 2016. These periods enabled me to avoid the 'dry season bias' and be present for both harvesting and planting seasons (Chambers 1983b). Returning to the same villages a year later also helped me to avoid being a 'rural development tourist', enabled me to triangulate findings, and served to strengthen my rapport with participants (Chambers 1983a). Language courses in the UK and in Iringa, combined with the self-learning from being immersed in the community, meant that I was able to conduct much of my research in Kiswahili, but I worked with two research assistants who aided with translation and transcription. Challenges of translation and of working with research assistants are discussed in Section 4.6.

I obtained a national research permit with the support of contacts at Iringa and Dar es Salaam Universities. Once I had arrived in Iringa, I met with the District Commissioner and a representative from the agricultural offices of Kilolo District to gain official permission and letters of introduction. At the Uhambingeto and Irole ward offices I obtained permission to meet with the village chairmen. I also had to attend a meeting of the village *balozi* (leaders) in Lumdamatwe and Vitono to introduce

myself and justify my presence in the village. In each village, I arranged to work with a local contact to support me in locating farmers and facilitating meetings. I also acquired invaluable insights simply by informally talking as we walked around the village. I paid my local village contacts TSh 5000 (USD 2.24[9]) per half day of work in recognition of their time commitment.

4.2. Village-based research with smallholder farmers

4.2.1. Farmer sampling frame

To draw up a sampling frame in Lusaula and Vitono I sat with my village contact and drew up a list of household heads, while in Kipaduka and Kitelewasi I made copies of existing household lists. Due to the well-established critiques of the notion of the 'household' and how to define it, and as Cheetah signs up farmers as individuals rather than households, I combined the household head lists with lists of participants obtained from Cheetah village agents (see Randall & Coast 2015). This avoided excluding wives, second wives, and sons and daughters who farm their own land (or their own portions of the family land) and who may participate in the Cheetah programme, but may not be included on the household head list. The decision to focus on individual farmers as a sampling unit was supported by three cases I came across during the fieldwork: households where the husband participates in one agricultural development programme and the wife a member of another; households where the husband and wife decided together to split their farm and each take out a loan from Cheetah for their portion of the farm; and families where the husband, wife, and daughter all had loans from Cheetah. Focusing on the unit of the household would obscure differentiated intra-household experiences of programme participation. Although my sampling unit was individual farmers, they are conceptualised as part of wider socio-economic and socio-cultural assemblages, as will be discussed in Chapter 7. This resulted in sampling frames consisting of 102 farmers in Luasula, 380 in Kitelewasi, 225 in Vitono, and 377 in Kipaduka.

4.2.2. Focus groups

A focus group is a 'group discussion organised to explore a specific set of issues' (Kitzinger 1994, p.103). Focus groups are more than just group interviews, due to their 'explicit use of group interaction to produce data and insights that would be less accessible without the interaction found in a group' (Morgan 1997, p.2). At the beginning of the fieldwork in August 2015, I used focus groups to learn about the context of agriculture in Lower Kilolo, and to pilot some questions to highlight issues of translation, both linguistic and conceptual. I initially met with the *balozi* of the sub-villages of Lundamatwe village. Through this meeting I arranged a series of three focus groups with groups of

[9] Using conversion rate USD 1 : TSh 2228 22/03/2017.

5 to 15 farmers in the sub-villages of Lusaula, Ihokelo, and Mjiwema. These meetings were open to all who were interested. In recognition of the time commitment, I paid participants between TSh 1000 (USD 0.45[10]) and TSh 3000 (USD 1.35[11]) depending on the activity. These amounts were decided based on discussions with my research assistants and local village contacts, and were enough to buy, for example, a soda or phone credit. Participants were not made aware that payment would be provided prior to the focus groups to avoid it shifting the incentive to participate.

In September and October 2015, I conducted three focus groups in in Kitelewasi and Vitono with a randomly selected group of farmers, with farmers participating in the Cheetah programme, and again with a randomly selected group to provide feedback. In Kipaduka, due to concerns over the imminent onset of the rains that risked making the village inaccessible, only one focus group was conducted to give feedback and discuss findings. Each focus group had between four and eight participants, consisted of a mix of men and women, and was held in a communal space such as the village office or meeting place. Participants were selected using random number generation from the sampling frame, with stratification for gender and programme participation.

In these focus groups we discussed agricultural practices, challenges, and opportunities, as well as issues relating specifically to participation in agri-finance schemes. These focus groups were useful for triangulating mutual understanding on key terms like 'market', 'loan', 'interest', and 'collateral'. They also provided a forum for participants to engage in dialogue with me about my research objectives and motivations, as well as to raise new points for discussion. I acted as facilitator (along with my research assistant) rather than leader or interviewer. I used a topic list and, from a general question such as 'what do you do in your farm throughout the year' or 'why did you decide to participate in the Cheetah programme', the conversation was led by the participants. Consequently, we discussed many topics that were not included on the original topic list, for example pests in the maize crop, government export bans, and the challenge of finding a market for tomatoes and sunflower.

The focus groups were useful, but also challenging to facilitate. Often one or two personalities had strong opinions and dominated the conversation. Willingness and confidence to participate was not necessarily defined by gender. In Kipaduka, for example, one female participant was the most outspoken, and the others tended to defer to her as she was well respected in the community and held many important positions in the school and the church. To avoid this situation, I ensured that I asked individual participants for their opinion on issues, and encouraged debate between participants.

[10] Using conversion rate USD 1 : TSh 2228 22/03/2017.
[11] Using conversion rate USD 1 : TSh 2228 22/03/2017.

Although I did not push them if they clearly did not want to participate, often when asked directly previously quiet participants were keen to engage in discussion.

4.2.3. Semi-structured interviews

4.2.3.1. Initial interviews, 2015

In 2015, I conducted semi-structured interviews to gather a mix of qualitative and quantitative data on basic livelihood and household conditions, and to explore livelihood challenges and opportunities and participation in agricultural development programmes. I firstly checked three iterations of the questions with my Kiswahili teacher and research assistant to ensure that my translations made sense, before piloting it with 10 farmers in Lundamatwe to check its operational effectiveness (Hoggart et al. 2002). During this pilot phase some issues of translation were raised, which are discussed in Section 4.6. In light of this pilot, I rephrased some of the questions and added or removed others.

Using random number generation, I selected farmers from the sampling frame in each village using quotas for farmers who participated in the Cheetah programme and farmers who did not participate. I also included stratification for gender. Twenty farmers were initially chosen in Lusaula and Kipaduka, and 30 in Vitono and Kitelewasi. These sample sizes (See Table 4.1) were based on the overall sampling frame and time constraints. The actual number of farmers in the sample varied as some participants were ill or out of town, and some extra interviews were conducted when time allowed. These sample sizes were justified by the repetition in answers provided, suggesting that saturation had been reached.

Table 4.1 Farmer sample sizes.

Village	Total sample size	Cheetah participants	Participants in Cheetah and another programme	Participants in another agri-finance programme	Non-participants
Lusaula	21	0	0	0	21
Kitelewasi	28	8	2	10	8
Vitono	35	15	2	10	8
Kipaduka	23	8	1	7	7
Total:	**107**	**31**	**6**	**29**	**46**

I firstly interviewed the chairman in each village. As well as the general questions I asked all farmers, we discussed village history and issues specific to farming and life in that village. I then proceeded to interview the farmers in the quota sample. Each interview began with a set of structured questions before moving to a semi-structured section based on a topic guide. Structured questions were useful in

gathering basic livelihood information, for example crops grown, farm acreage, education status, and age, but they were less appropriate for discussing more complex themes relating to the opportunities and challenges of farming, financial issues, and Cheetah participation. Furthermore, as Hill (1970, p.12) argues, conducting structured questions has 'a remarkable capacity to classify recalcitrant information so that it appears to fit into appropriate boxes, which results in the hardening of prejudices that rather require demolition'. The semi-structured topic guide extended the discussion about the challenges and opportunities of farming in Lower Kilolo and experiences of Cheetah participation. This ensured that key topics were covered, but also left room for participants to direct discussion and raise different issues. In recognition of the time commitment I paid participants TSh 2000 (USD 0.90[12]) each. This amount was settled on after discussions with my research assistants and local village contacts, and was enough to cover the cost of a soda or phone credit. Similar to the focus groups, farmers were not made aware that payment would be provided prior to the interviews to avoid affecting the incentive to participate. The payments were made in private to avoid any disputes arising with those who had not been selected as part of the farmer sample.

The interviews were generally carried out in the farmers' homes, courtyards, or fields. This gave me an insight into 'back stage' living conditions, and were spaces where the participants felt comfortable (Goffman 1959). In Kitelewasi, some of the surveys were conducted in the village office because there had been a political rally in the morning and people had congregated in the centre of the village. These first interviews were not recorded so as not to impede building rapport with participants, especially given the potentially sensitive nature of discussions on financial management and experiences of the Cheetah programme. I did, however, write extensive and often verbatim notes while my research assistant was translating. It was verbally agreed with participants that the interviews would be anonymous. I asked for farmers' names so that I could address them personally during the fieldwork, but in writing I gave each farmer a number. After the interviews, I recorded the answers to the structured questions on an Excel spreadsheet to enable me to conduct basic statistics and comparisons. The answers to the rest of the questions were typed up and recorded in word documents.

4.2.3.2. Return interviews, 2016

From mid-July to early September 2016, I returned to Vitono and Kipaduka to carry out return interviews with farmers. These two were chosen out of the four villages visited in 2015 due to reportedly high rates of farmer default on Cheetah loans, as well as fieldwork time constraints. These repeat interviews were less structured and longer than the initial interviews. We discussed changes over the year, for example to do with weather conditions, harvest yields, and experiences of Cheetah

[12] Using conversion rate USD 1 : TSh 2228 22/03/2017.

participation. This enabled me to triangulate with findings from the previous year to identify key differences and shifts as well as continuities and patterns. In Vitono, I firstly met with the village chairman before re-interviewing 11 farmers, including a mix of those participating in the Cheetah programme and non-participants. I also interviewed for the first time eight other farmers who participated in the Cheetah programme. I then returned to Kipaduka to re-interview nine farmers. This brings the total number of farmer interviewees to 116, and the total number of farmer interviews to 136. For these second interviews, I did ask for verbal permission to record the conversation using my phone, and in most cases this was granted. In total, I interviewed around half of the farmers participating in the Cheetah programme in each village.

To gain an overview of the intersections between money, maize, and religion I also conducted semi-structured interviews with representatives of the major religious groups (Lutheran, Roman Catholic, Tanzanian Assemblies of God, and Shafi'i Islam) in Uhambingeto Ward.

4.2.4. Participatory methods

4.2.4.1. Cultivation calendars

In the focus groups in Kitelewasi, Vitono, and Kipaduka, I asked farmers to talk through what they do in their farm during the year. Initially, we tried to draw up a visual cultivation calendar, but challenges of translation between English and Swahili, and the illiteracy of some of the participants, reduced its usefulness. I attempted to use pictures to illustrate different agricultural practices, but this proved to be more a point of humour than effective knowledge sharing. Eventually, we developed a system of talking through the calendar as a group while I wrote notes, which I then read back to the farmers, giving them time to comment or make corrections. This is similar to the 'open note-taking' method used by Hutchinson (1996, p.44) during her fieldwork with the Nuer. The cultivation calendars provided a foundation for discussions about how farming practices have changed over time and why, the role of weather, rats, pests, and diseases, divisions of labour within households and within the village, and about the implications of participation in the Cheetah programme for farming practices.

4.2.4.2. Participatory wealth ranking

To avoid painting a homogenous picture of farmers in Lower Kilolo, in July 2016 I conducted a series of wealth ranking exercises in Vitono. Discussing 'wealth' in rural Tanzania is a complex and problematic topic. The experience of *ujamaa* and African socialism still looms large in local culture, and means that wealth defined in terms of the accumulation of assets is sometimes understood as stealing from other members of the village. Moreover, strong beliefs in witchcraft persist in some areas, and therefore the rapid accumulation of wealth is sometimes regarded with suspicion

(Lindhardt 2015). As an example, I heard a case of a woman who had been murdered the previous year after she harvested a bumper crop of tomatoes compared to others in the village.[13] In the focus groups I attempted to discuss local conceptions of wealth, but the answer I commonly received was that there are no 'rich' and 'poor' in the village, all are 'average'. When I asked about ownership of specific assets, such as cows, I was told that owning cows is a sign of wealth, but farmers can become 'addicted' to cattle, and owning too many is problematic as it can lead to neglect of other livelihood aspects.[14] Farm size was also not directly linked to wealth, as not all of the largest farms were cultivated every year due to labour and capital constraints, and some farmers harvested large yields from a smaller area of land with the use of 'modern' techniques and quality inputs. In Vitono, one farmer possessed 40 acres, but only cultivated 10 acres, and only harvested one *gunia* (bag) of maize more than another farmer who only farmed three acres, but farmed very effectively.[15] Some other challenges relating to local conceptions of wealth are discussed further in Chapter 7.

Due to the apparent inappropriateness of externally constructed notions of wealth, for example number of cows owned, I decided to conduct participatory wealth ranking (Causemann & Gohl 2013). I wrote a random list of all the farmers in the village sample, and discussed with the village chairman whether it would be appropriate to ask people to rank members of the village. He said that government researchers had in the past used a ranking system from 1 to 4, with 1 being the highest and 4 being the lowest. I therefore asked three randomly chosen participants (two male, one female) to individually rank the farmers in the sample based on their own conception of social stratification. This enabled me to triangulate the rankings and discuss the differences between them. The resulting three rankings are broadly similar, with some variations between whether a farmer was ranking 3 or 4, or 1 or 2. After the ranking exercise I discussed with each participant the criteria they had used. All three participants initially placed those who had leadership positions in the local government or village school at the top of the ranking. They then used a combination of tangible and less tangible criteria, specifically maize harvest yields and budgeting and investment strategy. This wealth ranking exercise, although complex, was useful in suggesting triangulations between eligibility to participate in the Cheetah programme and local social stratifications, as well as association with experiences of the Cheetah programme. These associations will be discussed in Chapters 7 and 8.

4.2.5. Participant observation

Participant observation is an ethnographic method that has its roots in anthropology (Watson & Till 2010). Although it has faced criticism for being highly subjective and not reproducible, participant

[13] Interview with Otto Ulyate, Farm Manager, Rutuba Farm, Iringa, 01/12/2015.
[14] Focus Group, Vitono, 06/10/2015. Interview with village chairman, Vitono, 07/10/2015.
[15] Focus group, Vitono, 02/10/2015. Interview with farmer 52, Vitono, 01/10/2015.

observation provides insights into how values and attitudes translate into behaviours and relationships, as well as generating lived experience of social realities (Desai & Potter 2006). Lewis & Mosse (2006) emphasise how participant observation is useful for understanding how policies take place in practice, how multi-scalar relationships are 'brokered' and negotiated, how models and meanings are translated, and how unexpected outcomes occur. Practically, participant observation also helps to build rapport and break down barriers between research participants and researchers.

During fieldwork, I took detailed notes using three different notebooks: one for jotting down notes during the day, one for a detailed factual description of what I did and saw, and a personal diary for my thoughts and feelings about those events. This method enabled me to both separate out—and analyse together—what I saw, heard about, and experienced, alongside my emotional reactions. This helped to avoid distinctions between observations and interpretations becoming blurred (Emerson et al. 2011).

While all of my time in Tanzania could be termed 'participant observation', on certain occasions I engaged more directly in daily life with people in Lower Kilolo. On December 3rd 2016, I returned to Lusaula to meet with my village contact and his family to help plant their maize. Initially, they were reluctant to let me do more than observe, claiming that as a female *mzungu* (white person, European) I would tire easily. They taught me how to use a *jembe* (hoe), and then tasked me with placing the maize seeds into the holes they had dug. We worked together, talking and singing, for three hours until we returned to the village for *chakula* (food). This experience will be discussed further in Chapter 7.

I also attended a range of village events. In Vitono in 2015 I was invited to the primary school graduation ceremony, where I was asked to give a speech and hand out certificates. The following year, I was invited to the wedding of the village chairman's son where we danced, gave gifts, and celebrated together. Taking the time to be present at these events enabled me to build rapport and relationships in the village, meaning that people were more amenable to inviting me into their homes and spending the time to talk to me. These experiences also gave me more of a rounded experience—or 'thick description'—of life in the village, rather than just a detached, snapshot picture (Geertz 1973).

4.3. Research with Cheetah Development

To gain an insight into how Cheetah is organised as a social impact investor, how it constructs its model of agricultural development, and how it implements that model in Lower Kilolo, I interviewed

staff members from across the organisation. Following a formal recorded semi-structured interview, repeat informal and unstructured interviews were conducted in Iringa with Marco Johnson, Cheetah Vice-President Field Operations, from September to December 2015, and in July 2016. This provided me with a running commentary on events from the perspective of a Cheetah staff member, and enabled me to ask questions relating to my experiences in the field. I also formally interviewed three other senior Cheetah staff members in the Iringa office, as well as conducting informal unstructured interviews with field staff while on village visits. Finally, I conducted Skype interviews with the US-based Cheetah Founder and CEO, Ray Menard, and the Senior Vice-President Impact Investing and Philanthropy, Brad Brown. During these Skype interviews, Menard and Brown emailed me presentations and reports on the Cheetah model which, combined with the information on their website, provided insights into the construction of the model, its underlying assumptions about farmer livelihoods, and how it envisions ethical capitalism in agriculture in Iringa. The way in which I analysed these documents is discussed in Section 4.5.

To appreciate how the Cheetah model unfolds in the complex realities of farmer livelihoods in Lower Kilolo, I joined Cheetah field teams on village visits in Iringa and Njombe Regions in October and November 2015.[16] In Iringa Region, I observed Cheetah field teams holding meetings with participating farmers to discuss the programme and to hear farmers' concerns and suggestions. I also observed Cheetah collecting maize loan repayment and joining fees from farmers, and working with a local auctioneer to enforce repayment from defaulting farmers. In Njombe Region, the field team was scouting out new opportunities for programme expansion. We met with local government representatives, and presented the Cheetah programme to farmers on joint village visits conducted by Syngenta, Yara, and MVIWATA (Mtandao wa Vikundi vya Wakulima Tanzania – Network of Farmers Groups in Tanzania). I shadowed field team members and made myself useful with small tasks like carrying equipment and taking notes. This enabled me to see how the relationship between Cheetah field teams and farmers unfolds in practice, and to experience how the model is communicated to farmers and translated into practical operations.

The assumptions, models, and practices of Cheetah Development are investigated in depth in this thesis, and this raised concerns about consent and confidentiality. I discussed this in detail with the founder and CEO of the organisations, and it was agreed that I could cite the organisation and its staff members in this thesis, but any material made publically available would have to be subject to further discussion. When publishing material arising from this thesis I intend to anonymise all interviewees and provide a pseudonym for the organisation. To keep the organisation appraised of my findings I wrote a concise report after the first fieldwork trip detailing farmers' experiences of the programme,

[16] Participant observation with Cheetah field staff: Mwatasi 23/10/2015, Irole and Vitono 27/10/2015, Kipaduka and Itungi 31/10/2015, Njombe Region 09/11/2015 to 13/11/2015.

their suggestions about how it could be improved, and my own analysis. During the second fieldwork trip I discussed my findings at length with two Cheetah staff members, one involved in field operations and one with responsibility for programme planning.

4.4. Research with key informants from the wider agricultural development and social impact investing sectors

In accordance with a multi-scalar assemblage approach, I conducted interviews with a wide range of key informants in Tanzania, London, and the USA in person, via Skype, and on the phone. Key informants were identified firstly purposively, and then using the snowballing method. I traced associations by contacting organisations and people mentioned in interviews with farmers and other key informants. This opened up the project to a range of viewpoints that I would not have otherwise considered, including large-scale commercial farmers and flourmill managers, as well as private foundations, investment advisors, and development finance institutions. Conducting interviews in person was the preferred method, as it allowed me to appreciate facial expressions and body language, as well as aiding in the building of rapport. Skype provided a means of conveniently connecting with interviewees when face-to-face meetings were not possible (Hanna 2012; Deakin & Wakefield 2013). Before every interview, I fully explained my position and the purpose of the research, and asked the interviewee to complete a consent form (see Appendix G).

4.5. Document analysis and coding

During the course of the research I gathered a variety of documents, some of which were obtained through independent research (company, donor, and government reports), and others were sent to me by research participants (presentations by Cheetah and SilverStreet Capital). I delimited the timeframe to documents published prior to July 2017. Rather than taking these documents at face-value, I analysed and questioned the discursive social realities that they constructed, as well as the underlying assumptions, form, function, and intended audience (Hajer 1997). In particular, I looked at how social impact investors like Cheetah graphically represented their understanding of the challenge of agricultural development, and the model they proposed as a solution. Morgan (2012) writes that these graphical representations provide descriptive, prescriptive, and generative reasoning tools, and they provide insight into how the maker understands, delimits, and envisions what is being modelled. Giving form to ideas involves ‘a process of picking out the relations of interest, and isolating them from the frictions and disturbances which interfere with their workings in the real world to give form to simpler, and ‘ideal’, world models’ (Morgan 2012, p.21).

To analyse these secondary sources and my primary data without being blinkered by *a priori* assumptions, I employed open-coding. This is a form of data handling and concept generation in which increasingly focused descriptive and analytical codes emerge through the process of rereading the information gathered (Merriam 2009). I then asked questions of these codes, and looked at the ways in which they link to each other and form nodes of convergence, divergence, and clashes. In this way, coding 'is like using a high-powered microscope to examine each piece of data up close', enabling us to see the data in new ways (Strauss & Corbin 2008, p.59; Coffey & Atkinson 1996). To trace associations, norms, assumptions, and ideas I aimed to 'identify a thread, or multiple threads, that can be woven together to tell a story about the observed social world' (Emerson et al. 2011, p.171). I used the computer program ATLAS.ti, which simplified organisation of the multiple forms of data collected, for example field notes, transcripts, and grey literature (Punch 1998).

4.6. Issues of translation and positionality

Research across cultures necessarily involves translation linguistically, culturally, and conceptually, as well as from the spoken to the written and back again. It is therefore important to recognise and reflect on the ways in which opinions, experiences, and emotions are mediated and translated.

My research in Tanzania began by learning Kiswahili, the national language (alongside English), to try to reduce the distance of linguistic translation. Practically, being able to speak Kiswahili to basic working proficiency enabled me to live and work in Tanzania 'with the smallest amount of dickering back and forth' (Mead 1939, p.193). While learning the language does little to address the 'asymmetrical relations of power' between researcher and researched, stumbling over noun classes during an interview can work to complicate those power relations, and symbolises an attempt to engage on the terms of the research participants (Niranjana 1992, p.2; Watson 2004). I conducted much of the research in Kiswahili, but worked with my research assistants as translators where necessary to ensure mutual understanding and to enable the conversation to flow. I also learnt greetings in the local languages of Kihehe and Kibena, which enabled me to exchange greetings with people in their local language, helping to build rapport. There were some elderly people who only spoke Kihehe or Kibena, and so we employed a three-way translation involving my local village contact as well as my research assistant.

Some concepts in Kiswahili do not have a straightforward translation in English, and in these cases I have used the Kiswahili word with a clarification in English. I repeatedly came up against misunderstandings, had to rephrase questions, and had to discuss basic terms and concepts to ensure

mutual understanding. On a few occasions, I realised that the question I had been asking was being understood in a different way, or was only capturing part of the picture. Rather than papering over these issues of translation, I have written them into this thesis as they demonstrate valuable points of 'intercultural communication' (Sturge 1997). Appendix A contains a glossary of Kiswahili terms used in this thesis.

In 2015 I worked with two research assistants, one woman from Arusha for the research in Lusaula and Kitelewasi, and one man from Iringa for the research in Kipaduka and Vitono. I continued to work with this second research assistant on the fieldwork trip in 2016. In 2015 I paid TSh 25000 (USD 11.22[17]) per half day, and in 2016 TSh 12000 (USD 5.39[18]) per hour. These figures were mutually agreed upon, based on discussions with other researchers and research assistants working in the region. My research assistants helped me to arrange meetings, accompanied me on village visits, and translated during the interviews. My second research assistant also transcribed recordings from Kiswahili to English. Collaborating with these research assistants affected the project in different ways. In one interview, for example, a woman said that I should be more fluent in Kiswahili so I could conduct the interview without my male research assistant to enable us to talk more about women's issues.[19] On the other hand, the male research assistant was Hehe, the most populous *kabila* (ethnic group, tribe) in the region, and was himself a farmer, and so participants may have more easily related to him than the urban-based woman from another region.

I worked with my research assistants and participants as collaborators, for example by following a principle of 'open note-taking'. This involved reading back my notes to the research participants after every interview to ensure that I had not missed anything or misunderstood (Hutchinson 1996). The feedback focus groups also provided forums for discussion about research motivations, aims, and findings. Before beginning an interview, survey, or focus group, I clearly explained the motivations for the research, and gave participants the opportunity to opt-out at any time. I obtained verbal consent from farmers to record the interviews in 2016, and for formal interviews with key informants I asked them to complete a consent form (see Appendix G).

According to Cloke et al. (2004, p.170), a good ethnographer is 'someone willing and able to become a more reflexive and sociable version of him or herself in order to learn something meaningful about other people's lives'. This involves reflecting on how the researcher is 'entangled' in the research, and what this means for the research process and outcomes (Sundberg 2015). Throughout the fieldwork, I faced challenges of how to position myself in relation to the farmers on the one hand, and Cheetah

[17] Using conversion rate USD 1 : TSh 2228 22/03/2017.
[18] Using conversion rate USD 1 : TSh 2228 22/03/2017.
[19] Interview with farmer 80, Vitono, 21/07/2016.

staff on the other. When I first arrived in the villages I was immediately associated with an agricultural development or microfinance organisation in the eyes of the farmers, and it took a while for me to explain that I was interested in the work of those organisations, but I did not work for them. I positioned myself as an independent researcher, but able to provide a conduit for farmers to have their concerns heard at the offices of the agricultural development organisations. This gave me a purpose for being in the village that was beneficial for the farmers, rather than simply researching a PhD thesis. The farmers seemed to welcome the opportunity to discuss issues, and I was repeatedly asked to ensure that I had written down everything that they were saying so I could pass on their views to the agricultural development organisations. After my first fieldwork trip in 2015 I wrote a report detailing the concerns and suggestions raised by the farmers about the Cheetah programme, which I sent to my contacts at the organisation and discussed with them.

On my return in 2016, I found that certain Cheetah staff members were attempting to use my relationship with the farmers and my knowledge of their situation, for instance the size of their harvest, to enforce loan repayment and connect with new farmers to purchase their maize. I therefore had to take a step back and make my position as an independent researcher very clear. I did not want the farmers to feel betrayed by seeing me working with Cheetah, after gaining their trust as an independent researcher who they could talk to in confidence. After clearly explaining again my role as an independent researcher following confidentiality protocols, this issue was resolved.

Issues of positionality and translation also occurred in boardrooms, conference halls, and during Skype interviews with key informants from the corporate and policy worlds. While ostensibly these actors may appear to be more 'like me' in terms of their background, culture, and life experiences, in fact the gulfs between our understanding of certain issues, and the language we used to express ourselves, were sometimes extreme. I found that company representatives in the SII space were relatively keen to speak to me about their work, and more than one interviewee commented that they were happy that SII was attracting wider attention. I used LinkedIn to identify and contact key informants from organisations in the SII space, and was surprised at the high success rate I achieved. There was, however, confusion over who exactly I was talking to. In some cases, for example with Cheetah staff members, it became clear that the organisation had a strong message that the staff members were regurgitating back to me. While this is in itself interesting, it presented a challenge in building sufficient rapport for key informants to discuss their own experiences of the programme. On the other hand, some key informants clarified that they were expressing their own opinions, rather than representing the perspective of their organisation. This was reflected in the consent form, which asked key informants exactly how they would like to be cited in any published work emerging from the research.

Another challenge related to attending conferences on SII, which tended to be extremely expensive and therefore out of my reach. I successfully navigated this on one occasion by volunteering to help set up the conference in return for attending. I also struggled to gain access to certain forms of information from corporations, both due to corporate secrecy and due to their own confidentiality and anonymity agreements with clients and partners. In Lower Kilolo, I had to piece together a list of farmers participating in the Cheetah programme from local village agents, and I was not able (understandably) to access lists of farmers who defaulted on repaying their loans. In a different context, I was unable to access lists of high-net-worth individuals or asset owners who had invested their own capital in impact investing firms. These issues of gaining access to people and information thus shaped the research questions and methods.

A further challenge I faced in interviewing corporate key informants relates to asymmetric relations of power and knowledge. My status as a postgraduate student, and the specific knowledge I possessed from conducting research in Tanzania, may have made key informants more willing to engage with me under the pretext of sharing experiences and knowledge. I do not, however, have decades of experience in investment banking, and I analyse SII from the vantage point of a social scientist rather than an investor. I prepared for these interviews by reading up about investment terminology and practices, but there were occasions when we were talking across each other, or interviewees used jargon that I did not know. I also faced the challenge of translating the aims of my research to a corporate context, and ensuring that I did not appear either too idealistic or overly critical.

5. Social impact investing: from 'helping the rich get richer to helping the poor get richer'

5.1. Introduction

Over the past decade, forms of financialisation that are more attune to social and environmental impacts have gained in popularity, at least in rhetoric. This has been broadly described as 'social impact investing' (SII), and incorporates investments in multiple sectors, for example water, healthcare, education, and agriculture. SII borrows mechanisms, processes, and assumptions from other financial sectors, but applies them with the explicit intention of bringing about positive social and/or environmental benefits as well as financial returns, although the balance between the two may vary. Impact investors look for opportunities where financial and social returns are directly and positively correlated, so by enhancing financial returns the social impacts can be taken to scale and vice versa. Through SII the aim is, therefore, to build ethical capitalism in the agricultural sector, consisting of socio-economic relations that are perceived to be more just, more equitable, and ultimately more morally 'good' than the existing system. The term SII covers a wide range of actors with varying motivations, as well as diverse investment models intervening at different stages of the value chain.

While SII in African agriculture has become a 'hot topic' in certain financial and philanthropic circles, it has yet to attract much academic attention, and key analytical questions remain unanswered. In this chapter I explore the following questions:

How is SII in African agriculture emerging?

- What is driving SII?
- Who are the social impact investors and what are their motivations?
- How is 'social impact' defined and measured?
- How is African agriculture being constructed as a site for investment?

I identify four major drivers of SII in African agriculture: the search for new profitability frontiers; the business case to minimise environment, society, and governance (ESG) risks; a shift in mentality to emphasising 'doing good'; and a shift in the outlook of development and philanthropic actors. I unpack the 'fuzziness' surrounding what actually is 'social impact' and how it is being defined and measured. The chapter proceeds to examine a range of actors engaging at different points along the spectrum of SII in African agriculture, and how their motivations and understandings of SII differ. While some of these actors played a role in previous waves of agricultural development, many are

new to the sector or are engaging in different ways. The picture that emerges is one characterised by diversity in terms of actors, mechanisms, motivations, and expectations.

This chapter delves into why SII actors are looking to African agriculture. I explore a tension within the SII literature between presenting 'Africa' as a site of tremendous business opportunities, and 'Africa' as a site of struggle and poverty. In contrast to previous waves of agricultural development, the Malthusian threat of population growth is 'rendered technical' in the SII discourse as a business opportunity, adding a degree of urgency to investment. This depiction of the continent and its people enables SII to be framed as a means of financing agricultural development in Africa. The framing of 'Africa rising' has, however, been tempered in recent years, and more differentiated strategies of investment site selection have created an uneven geography.

5.2. What is driving social impact investing?

As discussed in Chapter 2, SII has a long heritage, but at the end of the 2000s the Monitor Institute recognised that the sector was on the cusp of moving from 'uncoordinated innovation' to 'marketplace building' (Monitor Institute 2009). The number of reported impact investments increased from 1,105 in 2010 totalling almost USD 2.5 billion, to 2,213 in 2011 amounting to over USD 4 billion, and to 7,551 in 2015 with USD 15.2 billion (Rockefeller Foundation 2012a; GIIN 2016b). These figures only include investments voluntarily reported to the Global Impact Investing Network (GIIN), and there is a lack of transparency surrounding precise capital flows. It is expected that the industry could grow to USD 500 billion in five to ten years (Monitor Institute 2009). As well a proliferation in the number of actors involved and the increasing volume of capital flows, the period from the late 2000s has also seen the development of SII institutional intermediaries and infrastructure, for example the Rockefeller Foundation's Impact Investing Initiative founded in 2008, and the GIIN in 2009. The Monitor Institute (2009, p.9) reports that 'despite the substantial disruptions in the general investment community that have left many people shell-shocked and others triumphal about capitalism's demise, impact investing innovation is proliferating'.

There are four major drivers of the expansion of SII in African agriculture, especially since the mid to late 2000s: 1) the search for new profitability frontiers; 2) recognition of the need to minimise environment, society, and governance (ESG) risks; 3) a shift in investment emphasis to 'doing good'; and 4) a shift in philanthropic circles to investment as a more sustainable funding option.

Firstly, the proliferation of SII represents a search for new profitability frontiers, especially in the wake of the financial crisis in the late 2000s. The crisis resulted in usually profitable and stable

sectors such as housing becoming seen as increasingly risky, and investors began to look elsewhere to find new profit opportunities. According to Ashkan Rahmati at The CDC Group, 'from 2008 until now the ability to generate yields that generate a return in traditional developed world markets has been quite hard, so people are looking for amazing investment opportunities where you are going to put all your money and make an outsized return.'[20] Morgan Stanley's Institute for Sustainable Investing found that in uncertain times investors view companies and funds with social impact goals as more stable in the long run (Morgan Stanley 2017). Figure 5.1 shows the rise of returns-driven impact investing (defined as targeting a net internal rate of return of 15% or higher) in relation to conventional private equity funds that invest in private companies with no specific social impact agenda (Cambridge Associates & GIIN 2015). It demonstrates that while the financial crisis in the late 2000s decimated conventional private equity markets, returns-driven SII remained relatively stable, and has continued to grow. This has been explained by the number of new funds raised in the post-crisis period.

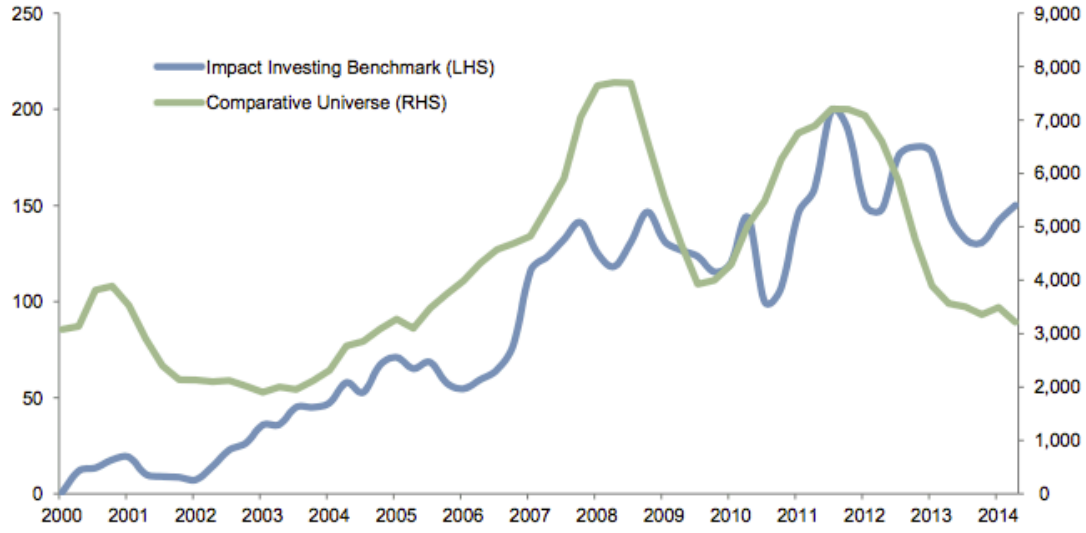

Figure 5.1 Capital invested through 138 returns-driven impact investing funds in comparison to a conventional private equity comparative universe using a four-quarter rolling average, as of June 2014 in USD millions.[21]

Secondly, an important driver has been self-interest in the form of minimising ESG risks to supply chains and business operations (Rockefeller Foundation 2012a). The shift towards SII is often cloaked in business reasoning, as demonstrated by Philip Rickenbacher, head of advisory solutions at Julius Baer: 'it is about screening for material ESG risk factors that can have a big impact on a company's

[20] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.
[21] Taken from Cambridge Associates & GIIN (2015, p.8).

financial success' (quoted in Greenhalgh 2017). Root Capital, a non-profit social impact investor reported that 'while we focused on the Impact Case, the Business Case for social and environmental due diligence began to build itself' (Root Capital 2014, p.3). They found that integrating social and environmental considerations into their investment due diligence improved their financial results in a variety of ways, for example in identifying credit risks and innovative businesses with growth potential. This reflects the mainstreaming of the narrative that so-called 'ethical capitalism' might not only be desirable, but also necessary in order to secure both future profits and social and environmental goals in a time of climate change, growing inequalities, and questions over the sustainability of an overly financialised economy in the wake of the financial crisis in the late 2000s. According to Amit Bouri, CEO of the GIIN, 'this investment is not just for profits – but for survival' (Bouri 2016). In this way, SII is partly driven by the self-interest of investors and investment funds. Ashkan Rahmati from the CDC explained that:

> *'You see a lot of companies willing to adopt it [SII] because again it is not just oh this is good from a social responsibility standpoint, but it actually commercially makes sense, and I think sometimes people forget that. If you look at it from a very brutalist point of view, if your workers don't get injured it means you get more fulltime hours out of them, right?'*[22]

It is evident from institutional reports and interviews with key informants that the financial crisis in the late 2000s also catalysed a moral crisis. Although financial decision-making tends to be reduced to seemingly objective and technical questions, 'all areas of business, including investment, inextricably contain ethical judgments and require intermediation between competing interests' (CISL 2014, p.5). This is explicitly articulated in the SII discourse. SII represents a qualitative shift in mentality that financial returns and positive social impact are not mutually exclusive, but instead they can (and perhaps should) augment each other. Many social impact investors appear to genuinely believe that it is possible to build a more moral capitalist economy with an ethic of care to benefit the lives of the disadvantaged and marginalised. The GIIN's (2017, p.iii) Annual Impact Investor Survey stated a call to action for impact investors as 'we have the tremendous opportunity to not just keep pace with the traditional capital markets, but to reinvent them entirely. The decisions we make today have the potential to shift attitudes, transform systems, and build the sustainable economy of the future'. Robert Jenkins from The Gatsby Charitable Foundation stated that:

> *'I don't think it [SII] is seen purely as a funding and a profit opportunity. I think there has been a change of mentality. I think most people are sold on the model that you can actually provide impact and at the same time generate a reasonable commercial rate of return. I think*

[22] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.

people are doing it because they genuinely believe that there is a better way of doing things that can have the right outcomes.'[23]

The financial crisis in the late 2000s was a key watershed in this shift in mentality because it demonstrated that much of the financialisation processes to date had been exploitative, speculative, and asymmetric, for example through the development of complex derivatives markets (Breger Bush 2012; Russi 2013). According to a recent UNDP (2015) report, a growing recognition of the need for 'responsible finance' after the global financial crisis in the late 2000s is a major driver of SII. The guilt felt by many investors sparked a move to rebuild trust in the industry, and to repurpose investment vehicles in order to 'do good'. This led to the emergence of a group of actors that the Managing Director of the Rockefeller Foundation has labelled 'The Friendly Capitalist', as opposed to those who solely pursue financial goals (Madsbjerg 2015). Related to this is the development of a raft of models and concepts to describe the generation of correlated positive social and environmental impacts and financial returns, for example 'blended value' and 'triple bottom line'. A 2017 report by the Business and Sustainable Development Commission entitled *Better Business Better World* states that SII offers 'companies a tremendous new growth strategy that could also help rebuild trust with society' (Business and Sustainable Development Commission 2017). David Kelly from H2O Venture Partners also stressed the importance of the financial crisis in this shift in mentality:

'if there was any reaction to the financial crisis it was wealthy people saying ok I have run my race in private equity or whatever they were doing before, and now what is the new flavour? They are the sort of people who make their money from business and they understand the importance of commercial discipline to deliver impact in the long term. I think they also like the idea of getting their money back and investing it for more philanthropy.'[24]

Another social impact investor echoed this by stating that 'now was the time to stop making rich people richer and start making poor people richer'.[25] Another said that 'we've heard a lot about the invisible hand of markets. Let's hear about the invisible heart of markets to help those whom the invisible hand has left behind'.[26] Robert Jenkins similarly highlighted that many investors:

'got to the stage in their career where they had made some money and they feel like they would like to do something interesting in the world, something different, and so they set up a

[23] Interview with Robert Jenkins, Director, African Agricultural Investment, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[24] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.
[25] Interview with Ray Menard, Chief Executive and Founder, Cheetah Development, Skype, 17/05/2016.
[26] Sir Ronald Cohen speaking at the 11th Skoll World Forum. Quoted in Nicholls et al. (2015)

fund and off they go... they get on a plane out to East Africa and see if they can do any good in the world. For every one that fails there will be another one or two that come, and there is a never-ending to-do list.'[27]

This shift in mentality is not limited to the investors themselves, but also affects consumers and the ultimate owners of wealth, for example, shareholders, family offices, and high-net-worth individuals. A PwC survey of major private equity houses in the UK and the US found that 88% of respondents believed that shareholder attention to ESG issues would increase in the next five years (PwC 2012). Herve Guez, Director of Responsible Investment Research at asset management firm Mirova, emphasised the role of pressure from clients and beneficiaries in driving SII (cited in CISL 2016, p.1):

'with crisis after crisis engulfing the world, the era of sustainable development is long overdue. Many of our clients and beneficiaries are there already. They are asking us how we are using their money to create a better world, and we are struggling to respond… be empowered to view your investments in a different way.'

Part of this involves an apparent generational shift, with so-called 'millennials' (those born in the mid 1980s to late 1990s) increasingly taking over the reins of money management. These millennials are positioned to control USD 41 trillion in the coming decade, and are two times as likely as the overall investor population to invest in SII (US National Advisory Board on Impact Investing 2014; Morgan Stanley 2017).[28] Amit Bouri, CEO of the GIIN, highlighted that millennials are increasingly taking the perspective that 'a retirement nest egg is of little use on a planet without clean air and safe water' (Bouri 2016).

The emphasis on 'doing good' within SII provides a point of contrast with other forms of socially responsible investment. Instead of aiming to secure supply chains and brand image by negative screening to eliminate potentially damaging impacts, SII focuses on positive screening and actively seeking out investments and projects with the potential to generate positive social impacts. In response to these factors, opportunities have been sought in sectors that were previously viewed as the preserve of governments or philanthropy, for example affordable housing, healthcare, education, water, waste, and agriculture. According to Peit Klop from impact investor PGGM, 'this is putting the soul back into finance' (cited in GIIN 2016a).

[27] Interview with Robert Jenkins, Director, African Agricultural Investment, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[28] Interview with Brad Brown, Senior Vice-President Impact Investment and Philanthropy, Cheetah Development, Skype, 07/10/2016.

The fourth driver of SII originates from within the philanthropic and development sectors, as SII is being adopted as a narrative framing by donors, private foundations, and NGOs. These organisations are looking to SII due to appreciation of the professed benefits of harnessing capital and 'commercial discipline' to drive positive social and environmental changes, rather than it being a necessary evil that must be curtailed.[29] This reflects an ideological shift to embracing economic growth as the primary mechanism for development, for instance through 'developmentally beneficial investment' (Mawdsley 2015).[30] In the UK, DFID has prioritised fostering the private sector as an 'engine of growth' by, for example, increasing funding for the CDC and the Private Sector Development Group, and through initiatives like the Impact Investment Fund. According to a 2011 DFID report, 'we know that there are investment opportunities in the poorest countries and that there are returns to be made' (DFID 2011, p.6).

The shift towards embracing the private sector is occurring in the context of a growing recognition that the magnitude of the world's most pressing problems is beyond what can be met by philanthropic capital alone. Additionally, development actors are facing heightened competition for increasingly limited public funding. It is estimated that there is a USD 2.5 trillion annual gap between current investment levels in the Global South, and what is needed to fulfil the Sustainable Development Goals by 2030 (CGAP and Symbiotics 2016). This is an especially pressing issue in the context of agriculture, which has been receiving a declining percentage of total overseas development aid for the past thirty years, as depicted in Figure 5.2.

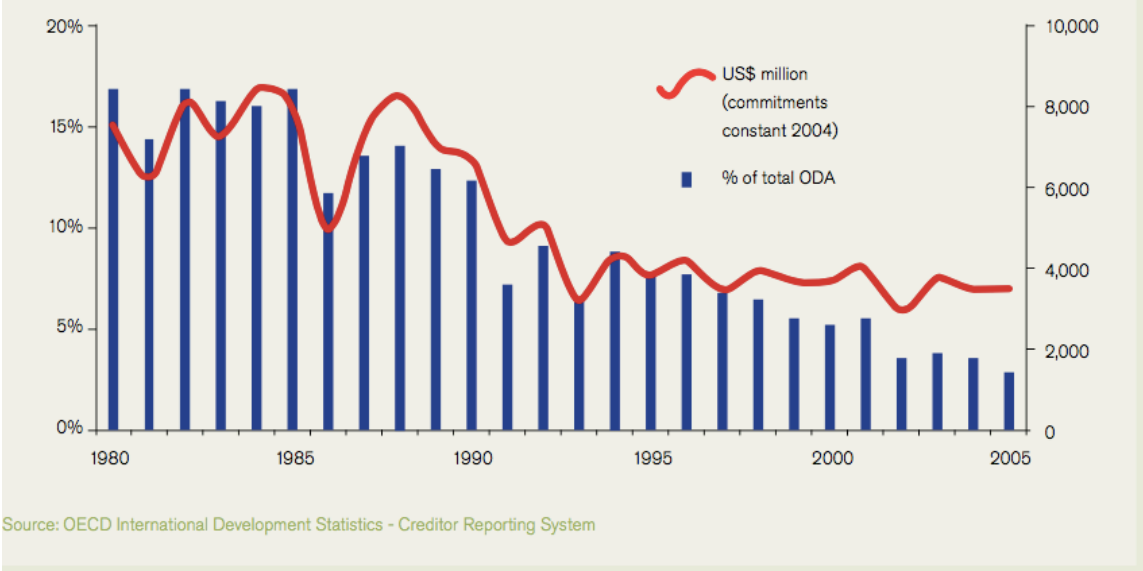

Figure 5.2 Official development assistance to agriculture, 1980–2005.[31]

[29] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.
[30] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby charitable Foundation, Skype, 27/02/2017. http://keithpalmer.org/pdfs/PIDG_article,_Final_PMU.pdf
[31] Taken from Kilimo Kwanza Executive Committee (2013, p.26)

Brad Brown, Senior Vice-President Impact Investing and Philanthropy at Cheetah Development, highlights that in times of limited donor funding, traditional development organisations have to face serious questions about the social return of the dollars they invest in aid projects.[32] In response, organisations are looking to demonstrate the financial viability of projects in order to attract capital and partner with private sector actors. According to Michael Dean, Co-Founder of AgFunder, 'that is the future for them [NGOs]. I think you need to not necessarily be profitable, but you need to be revenue driven because that is the only model that works. Doing it the way they have always done it, it has just failed.' Saadia Madsbjerg, Managing Director of the Rockefeller Foundation, advocates for SII on the grounds that 'regardless of lofty visions and global summits, what the world of international development needs is a source of funding that is predictable and sustainable, not one that appears and disappears on political whims' (Madsbjerg 2015). This is an interesting perspective, given the tendency for volatility and speculation within financial markets and models.

The resulting dovetailing of philanthropy and finance through the narrative of SII is expressed by the US National Advisory Board on Impact Investing (2014): 'it links the social consciousness of philanthropy with the market principles of business. It's about how the power of markets can help to scale solutions to some of our most urgent problems'. Philanthropic actors aim to mitigate risks by investing capital at sub-commercial rates of return to leverage further private capital into development projects. The intention is ultimately to make projects and businesses appealing and commercially viable for mainstream investors who do not have to invest in the sector based on a social impact mandate. David Kelly from H2O Venture Partners explained that SII:

> *'holds out the potential that if you can make it profitable then those returns will attract more money to the sector than might otherwise flow. You start to move from the straightforwardly philanthropic money to the kind of philanthropic money that would like to get its money back so it can do more philanthropy, and ultimately potentially to the kind of money that is driven more by the returns than the impact, or rather sees the potential for return in an impactful business.'*[33]

The result of these processes is that a hugely diverse array of actors, motivations, practices, locations, sectors, and expectations are grouped under the heading of SII. In practice, beyond a general commitment to building more ethical socio-economic relations that positively benefit society, SII is characterised more by its messiness and incoherence, and it is challenging to attempt to draw

[32] Interview with Brad Brown, Senior Vice-President Impact Investment and Philanthropy, Cheetah Development, Skype, 07/10/2016.
[33] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.

generalisations about the sector as a whole. The rest of this chapter will unpack some of this fuzziness.

5.3. How is 'social impact' defined and constructed?

SII is commonly defined as the intent of the investor to create social impact as well as financial returns. Often remarkably absent, however, is a consideration of how to define and measure that social impact. While there are recognised and standardised means for understanding financial impact, for example return on assets and return on investment, no such clear consensus exists for social impact outcomes (Tideline 2016; CISL 2016). When asked about how to define, monitor, and assess social impact, Brad Brown replied that 'the answer is still pretty fuzzy'.[34] This 'fuzziness' is partly due to the relatively recent mainstreaming of SII, but is also related to the diverse and context-specific ways in which social impact can be understood and pursued by different organisations. There are, however, a variety of incentives for defining and monitoring social impact. These include tracking, evaluating, and demonstrating achievement on social impact aims, communicating impact outcomes to other stakeholders, and comparing between funds and projects.

SII raises questions about who should establish what a positive social impact actually entails, and this entails moral judgements and priority-setting. Perspectives may differ between the impact investor, the investee businesses, and the intended beneficiaries. Subsequently, there are important power relations at play in settling on a definition. Positive social impacts can occur at multiple points in the operation, for instance through providing a socially beneficial product; through increasing the participation of disadvantaged populations; or by locating operations in an underserved community to generate economic benefits (Bridges Ventures & AVCA 2014, p.7). They can also take many different forms, some of which are measurable while others are less so. Positive social impacts pursued include food security, financial inclusion, empowerment, expanded job opportunities, higher incomes, community development, better nutrition, improved market access, and health improvement.

In 2017, the CDC set out a new SII agenda that aims to broaden the focus on job creation to include women's economic empowerment, climate change adaptation, job quality, and skills and leadership.[35] SilverStreet Capital, a social impact investor in African agriculture, pursues a range of social impacts including providing employment, directly supporting local community development, and increasing market opportunities and therefore incomes for smallholder farmers. For SilverStreet, according to

[34] Interview with Brad Brown, Senior Vice-President Impact Investment and Philanthropy, Cheetah Development, Skype, 07/10/2016.
[35] http://www.cdcgroup.com/Media/News/Strategic-Framework/

Chief Investment Officer Gary Vaughan-Smith, producing social impacts also serves to mitigate risks of investment by endearing the company to the local community:

> *'On the community impact, there's firstly employment. There is not much going on in Iringa. We are training people to run a factory with all the latest stuff. Yes, we are creating employment and it has a multiplier effect on those families. The real benefit is if we can work with small-scale farmers. That has the biggest multiplier so that is our goal. My colleagues want to keep showing that we are helping schools and the local community, and that is helpful and good. The real impact though is to raise the income of those small-scale farmers, and your political risk is low because you are benefitting thousands of people and then you have got everybody on your side'*[36]

Some investors have aligned their impact objectives with the Sustainable Development Goals (SDGs) as an internationally agreed benchmark to identify what constitutes a 'good' or 'bad' impact. This serves to provide a common language of social impact across diverse organisations (CISL 2016; GIIN 2016a). The SDGs are, however, very broad and do not directly relate to specific impacts or measurement strategies, something that could result in 'SDG-washing' (GIIN 2016a, p.5).

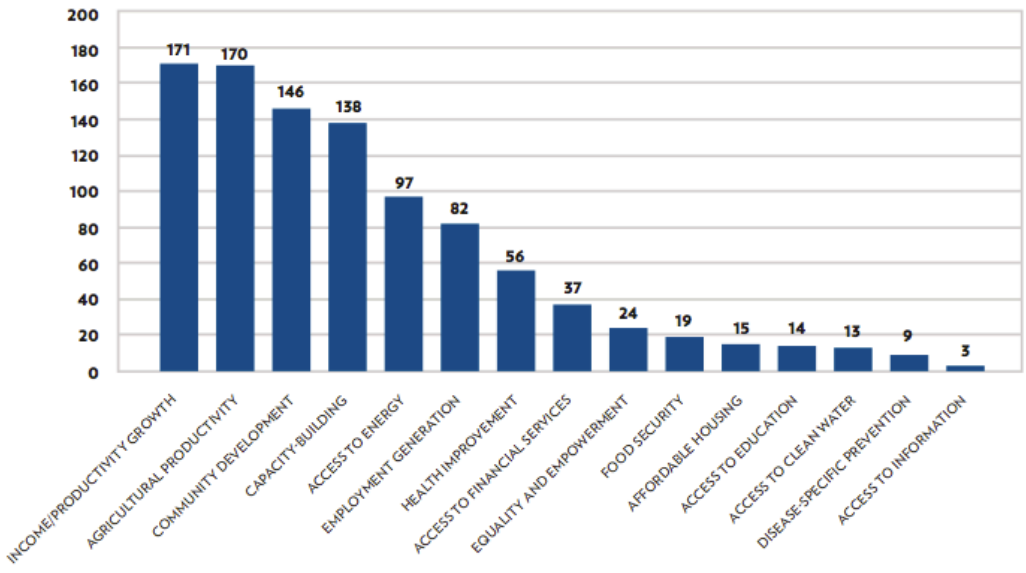

Figure 5.3 Number of organisations reporting to the GIIN that target different impact objectives.[37]

[36] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[37] Taken from GIIN (2015).

Figure 5.3 illustrates the range of impact objectives targeted by organisations reporting to the GIIN. Some of these objectives are closely interrelated, meaning that pursuing one may have implications for another, for example 'agricultural productivity' and 'food security, or 'employment generation' and 'capacity building'. This graph also suggests that some are more popular than others, for example 'income/productivity growth' and 'agricultural productivity'. The popularity of objectives surrounding income and productivity raises questions about whether 'social impact' is equated with creating consumer markets, commercialising production, and channelling more money into (some) peoples' pockets. Silverstreet Capital, for example, 'are just going to provide the market and act ethically in buying off them [smallholder farmers] at fair prices. It is all we have to do.'[38] In other words, this may represent the discursive repackaging of the standard goals of investment as generating positive social impact.

There is reason for further scepticism over the distinction between traditional investment and SII if all investment flowing into the Global South and underserved communities can be perceived to generate positive benefits and be classed as SII (Bridges Ventures & AVCA 2014). The GIIN's (2017, p.15) survey reflected concerns among impact investors that 'the label impact is being used because it is in vogue. ESG and SRI [socially responsible investment] investments are now being repackaged as impact'. This means that 'it's difficult to tell how 'new' the money is—are these investments that were being made previously but are now branded as 'impact' or 'sustainable', or are they actually a new investment strategy?' (GIIN 2017, p.15). Some social impact investors like Root Capital argue that producing 'social impact' is equated with doing good business, and should be practised by all investors, negating the need for a distinction between traditional investing and SII: 'what we call 'social impact,' in the form of timely and ideally higher payments to producers, is simply good supplier relations to the agricultural businesses to which we lend' (Root Capital 2014, p.7).

Similar to other strands of development thinking, many social impact investors in the agricultural sector appear to be operating on a theory of change that links increased agricultural productivity and income with poverty alleviation and improved welfare. These theories of change are often underpinned by a focus on the 'bottom of the pyramid', the four billion people globally who are largely excluded from formal markets, earn less than USD 8 a day, and 70% of which depend on the food value chain for their incomes (World Economic Forum 2009). This 'bottom of the pyramid' population is being presented as a large and growing consumer market, an underutilised agricultural resource, and a pool of entrepreneurs, which together provide a huge investment opportunity.

[38] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.

What is less clear is how social impact investors understand the drivers behind the social challenges that they are trying to address, who the winners and losers are, or how positive multiplier effects are to be achieved through SII when previous development attempts have failed. In Figure 5.4, which details the theory of change of agricultural social impact investor AgDevCo, it is unclear why farmers' incomes and productivity are low in the first place, or how increased investment in private sector agriculture leads to improved prices, which in turn leads to better nutrition for consumers.[39]

Figure 5.4 AgDevCo's 'Theory of change'.

The hype around SII creates the illusion that all social issues can be dealt with by investment models that expect to generate a financial return. The World Economic Forum, for example, stated that

[39] Image taken from http://www.agdevco.com/our-social-impact/theory-of-change.html.

businesses can 'reframe the problems' by 'finding ways to leverage them into business opportunities' (World Economic Forum 2009, p.6). Some interventions with high social impact, however, may be fundamentally unprofitable either due to the current state of the market or due to the nature of the problem (GIIN 2016a). This is also a moral question, as 'not everything can or should be priced… not everything that can be priced should have its price determined by market forces' (CISL 2014, p.13). Furthermore, interventions based on 'profitability' and enforcing financial discipline may miss the poorest of the poor—as occurred in the first green revolution detailed in Chapter 2—and instead benefit those already best able to absorb the investment capital, adopt new practices and equipment, and meet financial stipulations. The promotion of SII means that charitable organisations catering for the poorest of the poor may be at risk of losing funding to impact investors, and are under increasing pressure to take on loans and make investments using capital provided by funders who expect a financial return on their investment. According to Robert Jenkins, 'some charities invest their funding. I look at some of them and think oh my god, I hope you realise you are probably frittering your capital away.'[40]

Even if it is clearly defined and understood, measuring and monitoring social impact can consume time, money, and effort for both the people doing the monitoring and those being monitored.[41] This means that when it comes to monitoring and measuring social impact 'that is where impact investors quite often fall down'[42], resulting in a lack of evidence to support claims of social impact. Firms often focus on a limited number of metrics as proxies for broader social impact, for example 'lives touched' and 'economic value created'. These measures, however, do not reflect the diverse ways in which social impact can be defined and experienced. Jenkins observes that the measurement of social impact can become inefficient and a barrier to the achievement of the desired financial return:

> *'The investee businesses are often not really interested in the impact side of things and they just want to make money. The fund manager is under such pressure to generate his commercial returns, and very quickly that becomes the be all and end all... The person managing the money and the person you have provided the money to therefore tend to lack incentives to actually go through with the impact measurement side… You overlay the need to*

[40] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[41] Vivina Berla, Co-Managing Partner, Sarona Asset Management, speaking at the Business Fights Poverty Conference, Oxford, 11/07/2017.
[42] Interview with Phil DeMuth, Managing Director, Conservative Wealth Management LLC, Skype, 21/02/2017. Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.

measure impact on top of a model and actually at the end of the day it overlays expense and, in a commercial sense, inefficiency.'[43]

Measuring and monitoring social impact, however, may be crucial to understanding who is benefitting from the investment, especially as market-orientated development presupposes competition and the production of winners and losers. It might be the case that while one group is experiencing positive social impacts, another sector of the community is suffering increased hardship. Jenkins links the problem of uneven positive social impacts to farmer mindsets and entrepreneurship:

'Very quickly what you get is an environment where a smaller number of people benefit disproportionately well as they are more entrepreneurial and they get the model. You help a few people from USD 1 a day to USD 10 a day and maybe into lower middle-class farmers, but most of the people get left behind.'[44]

In response to these concerns, there have been attempts to introduce standardised guidelines to 'render technical' social impact assessment into a form that is legible to investors, and that enables comparisons to be drawn between projects, companies, and funds, as well as over time. The introduction of standardised metrics can be understood as an attempted to solidify and formalise the relationships assembled between diverse actors within SII to make them durable over time and space. For the Monitor Institute (2009, p.48), standardised metrics are important because:

'these actions can help guard against the risk that investing for impact might become too easy—enabling rigor, discipline, and high standards by creating, for example, metrics that define what qualifies as impact investing. They can also help address the risk that this new style of investing stalls because it remains too hard by building the necessary intermediation that can help avoid hype and sloppy execution.'

Examples include the Global Impact Investment Ratings System (GIIRS) created by the non-profit B Lab, the Impact Reporting and Investment Standards (IRIS) framework of the GIIN, and the social return on investment tool. The latter is a methodology that seeks to place a monetary value on the social benefits produced by an initiative. In this way, it is an attempt to commodify social impact to render it tradable and comparable using economic valuation. IRIS, on the other hand, is a catalogue of qualitative and quantitative 'generally accepted performance metrics that leading investors use to

[43] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[44] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.

measure social, environmental, and financial success'.[45] The IRIS metrics include 'access to clean water and sanitation', 'access to education', 'access to financial services', 'capacity building', and 'equality and empowerment', to name a few.

While these frameworks have lent a degree of credibility to the field and have facilitated the monitoring of performance and the drawing of comparisons, they have proved controversial, and SII has been described as 'metrics-rich' but 'data-poor' (Rockfeller Foundation 2012b, p.8). The Rockefeller Foundation notes that there has been little involvement of stakeholders from the Global South in the formulation of the IRIS metrics, as well as a range of other barriers that are detailed in Figure 5.5 (Rockefeller Foundation 2012b).

CATEGORY	DESCRIPTION
Defining positive impact	Diverse stakeholders hold diverse definitions of positive impact; some definitions may be competing or conflicting.
Examining complexity of impact measurement	Impact is multidimensional, making standardization of measurement a challenge.
Recognizing mismatch of methods with early-stage business models	Early-stage business models may not lend themselves to measurement, while the fluid and evolving nature of enterprise may necessitate the adoption of numerous and different business models throughout the lifetime of the enterprise.
Perceived value vis-a-vis alignment with investor priorities	Incentives for impact measurement can sometimes be unclear. The value of impact measurement is not consistently understood, including how it can support operations.
Navigating how impact investing fits into the larger landscape	Investors struggle to see how their vision for impact might align with larger existing efforts, such as SDG measures. Current measurement systems exclude B corporations and corporate social responsibility writ large and other classes of companies.
Facing lack of specificity about intentionality	Investors struggle with intentionality of their impact goals, resulting in a weak link between goals and what is measured.
Articulating the value proposition	The value of impact measurement has not yet been clearly articulated and communicated.

Figure 5.5 Barriers to social impact measurement.[46]

Standardised frameworks have also been criticised as being too cumbersome, top-down, and prescriptive to be useful for assessing early stage programmes and enterprises working in emerging and developing markets.[47] At a recent SII event run by The Economist, Abigail Noble from ImPact critiqued the disciplinary efforts to create standardised metrics, and proposed that 'measurement and transparency are critical to the impact sector's maturation, not standardization, control and regulation'

[45] https://iris.thegiin.org/guide/getting-started-guide#welcome
[46] Taken from Reisman & Olazabel (2016, p.9)
[47] Interview with Brad Brown, Senior Vice-President Impact Investment and Philanthropy, Cheetah Development, Skype, 07/10/2016.

(quoted in Price 2017). David Kelly from H2O Venture Partners also argues against the principle of monitoring who benefits from a SII programme on the basis that:

> *'when did it ever happen in the West? I find that such a paternalistic approach to development. I find it bewildering that it gives people concern about the whole idea of increasing smallholder farmer income that in some cases that farmer might be a man who drinks the money away, and then comes home and beats his family. Well you just can't respond to that by saying we must make sure that when we develop our social enterprise that it doesn't trade with men or alcoholics.'*[48]

Kelly is objecting to the subjection of intended beneficiaries to surveillance, and the penetration of the social norms and assumptions of the project organisers into their everyday lives. Rather than 'long laundry lists' of 'soft' qualitative measures, he argues for defining social impact as analogous to poverty alleviation measured through the metric of net additional dollars in the pockets of smallholder farmers.[49] This simple measure enables comparisons to be drawn between projects, between businesses, and over time, and provides investors with a quantifiable means of assessing which programmes are the most impactful. However, it simplifies and quantifies 'social impact', and papers over qualitative differences in experiences, for instance based on factors like gender, ethnicity, or location.

Another social impact investor, Cheetah Development, also takes the perspective that their 'objective is livelihood development not the more difficult targets like training, health, etc. Therefore, we are able to see intrinsically measured results—they are a part of our financial data, which is audited.'[50] Cheetah founder and CEO Ray Menard continues to explain his faith in discipline through financial mechanisms:

> *'The most important number for us is how much money did we pay our farmer, and we know that because we paid it. That is a hard target on our back that no NGO has ever had. The loan got repaid, the farmer got paid, we made money. Wow these are serious hard measurements. When we are asked to do the soft measurements that NGOs have we used to accept it, but now when we are asked to do it we decline, and when we are asked sternly we refuse because it kills our work. That is not business.'*[51]

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[48] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.
[49] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.
[50] Cheetah Development (n.d) *Solving the Biggest Problem in International Development*.
[51] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.

5.4. Who are the social impact investors?

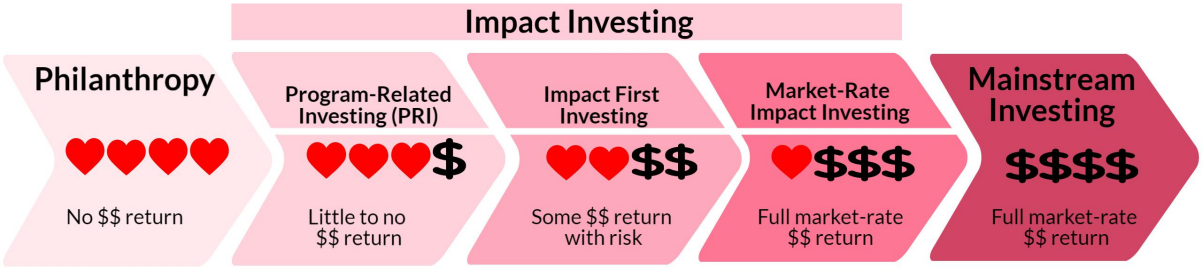

Figure 5.6 Graphic demonstrating the spectrum of impact investing.[52]

The SII space is crowded by diverse actors as 'there isn't one single way to be an impact investor' (GIIN 2017, p.iii). As shown in Figure 5.6, social impact investors are situated on a spectrum that ranges from financial return driven investment to impact driven investment. Some actors are willing to accept below-market rates of financial returns to achieve higher impact, while for other investors the social impact must be contingent on the achievement of full market returns. In this context, 'rate of return' is defined as the annual income from an investment expressed as a proportion (usually a percentage) of the original investment, and 'market rate of return' is the average rate of return expected in a particular market sector or index. This section will investigate the motivations of some of the actors situated at different positions on this spectrum and how the concept of SII travels to take on different meanings depending on the actor's expectations and aims.

Organisations that are situated to the centre-right of Figure 5.6 intend to generate market rates of return, as well as generating positive social impacts. This reflects the idea that it is possible to make money from ventures and businesses that are socially orientated, and employing a business approach can take positive social impacts to scale. A survey of 138 returns-driven impact investors by Cambridge Associates & GIIN (2015) concluded that it is possible to attain market-rate returns from impact investing. Similarly, 89% of impact investors reporting to the GIIN in 2016 experienced financial performance in line with, or better than, their expectations (GIIN 2016). There is, however, a lack of transparency surrounding the reporting of financial returns, and it is highly unlikely that funds failing to meet their expected financial return would voluntarily report this outcome in either survey.[53]

Private equity funds (organisations investing in private companies through equity, debt, or buyouts) have been key organisations operating in the returns driven SII space. From the mid 2000s, pre-

[52] Taken from https://www.netimpact.org/careers/impact-investing.
[53] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.

existing private equity and venture capital houses, such as Renaissance Capital and TLcom, have opened up agricultural SII funds. New specialist funds, for example SilverStreet Capital, are proliferating and raising capital to deliver social impact through investing in a range of projects. Similar to cases of land acquisition in SSA, many of these funds are still in the fundraising and planning stage, and the implications in practice are yet to be seen. The fact that funds have not yet materialised into active investments, combined with the lack of transparency in the private equity sector as a whole, the fragmented nature of sector and regional data, and the lack of historical data means that it is difficult to draw statistically informed statements about the volume of SII private equity capital flowing into African agriculture.

Private equity funds are engaging in SII as they seek to diversify their portfolios following the financial crisis in the late 2000s, and tap into investor concerns for a 'triple bottom line' taking into account social, environmental, and financial impacts, as well as the changing mentality of investors towards building a more moral capitalist economy as discussed earlier. The food price hikes in the late 2000s also incentivised private investment in African agriculture by shifting the risk/return equation, leading to the anticipation of higher returns on investment. Vaughan-Smith from SilverStreet stated that 'we set up in 2007 and decided only to focus on investment in agriculture in 2009 straight after the credit crunch'.[54] Private equity funds allow the pooling of capital from multiple investors to increase the capital available for investment and reduce the risk for any one investor. As well as financial resources, private equity funds also often provide non-financial inputs in the form of expertise, networking, and management skills. Investments are being made across agricultural value chains in primary production, for example contract farming, as well as upstream (input provision) and downstream (processing and distribution).

Many of these private equity funds take the perspective that using a financial model can enable social impacts to be taken to scale, as Vaughan-Smith explains 'we are forecasting the highest return of all our projects for our Tanzanian one. It also has the highest impact, and that is not a coincidence as you are getting scale'.[55] Figure 5.7 illustrates the percentage of SII organisations reporting to IRIS in 2011 that showed a positive net income. For-profit impact investments are being made across a variety of sectors and regions with a range of profit realisations. It must be kept in mind, however, that only a small number of non-financial organisations were included in the report, and organisations failing to make their expected financial return are unlikely to voluntarily report results.

[54] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[55] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.

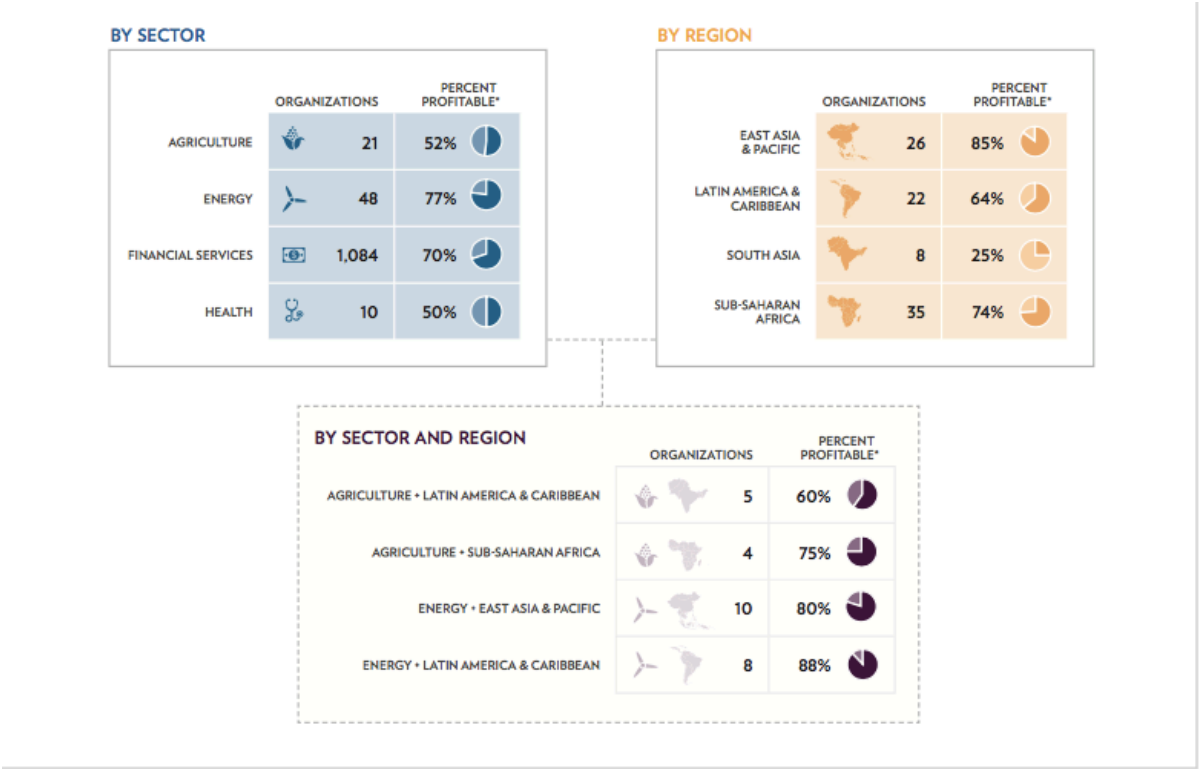

Figure 5.7 SII by sector and region based on organisations reporting to IRIS in 2011.[56]

In contrast, there are actors situated to the centre-left of Figure 5.6 who conduct programme-related investing—with the potential for return of capital within an established time-frame—and impact-first investing. The GIIN's (2017) Annual Impact Investor Survey estimates that one third of impact investors deliberately target below market-rate returns. These include private foundations, which are non-profit organisations often created through an initial large donation, and development finance institutions (DFIs), institutions funded by national states that provide finance for investments promoting development. Private foundations and DFIs have attempted to establish themselves as leaders in SII by committing capital to demonstrate the commercial viability of sectors like smallholder agriculture, generate social impacts, and leverage further private financing.[57] David Kelly from H2O Venture Partners agreed that social impact investments 'are an attractive area in the development and aid community because they hold out the opportunity of providing solutions that are financially sustainable, and so go on beyond the end of the donor funded programme. That is self-evidently a good thing.'[58]

For private foundations, such as The Gatsby Charitable Foundation (Gatsby), SII is a means of efficiently channelling donations to achieve a social mission, while building the commercial viability

[56] Taken from IRIS (2011, p.8)
[57] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.
[58] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.

of the sector. Rather than employing a fund manager to grow their assets separately from the pursuit of their mission, foundations are beginning to align these two sides through SII. These institutions and foundations have a long history of engaging with social and environmental issues, but are beginning to position SII as a more sustainable form of capitalising projects. Robert Jenkins, Investment Director at Gatsby explains that:

> *'maybe you will invest a dollar and only get 80 cents back, but in doing that you can be far more impactful than just doing a dollar of straight aid money. Of course, if you get 80 cents back you can invest it again and again and again whereas a dollar of aid or donor money, that is a one off hit.'*[59]

Gatsby's mission is 'accelerating inclusive and resilient economic growth in East Africa by demonstrating how key sectors can be transformed'.[60] One way in which they aim to achieve this is through setting up the pioneering African Agricultural Capital fund in 2005 as the first private equity fund dedicated to investing in agricultural small and medium sized enterprises (SMEs) across East Africa. Through this fund, Gatsby invests in SMEs for social impact and financial return in order to make them profitable and appealing to other private investors, build value chains, and benefit large numbers of smallholder farmers.[61]

DFIs claim to invest in underfinanced markets with developmental aims. CDC is the UK's DFI and is wholly publicly owned with DFID as its sole shareholder and all profits being re-invested. It is the world's oldest DFI, founded in 1948 as the Colonial Development Corporation and renamed the Commonwealth Development Corporation in 1963. Now it is simply known as CDC, and is one of the largest investors in Africa. While its financing mechanisms and geographical focus have shifted over time, CDC has retained its stated core dual objectives of reasonable financial returns and lasting development impact. Rather than accepting trade-offs between the two, it has minimum standards for each which need to be met independently. CDC currently only invests in Africa and South Asia through a combination of direct project financing and indirectly through other funds, often with flexible timeframes. The focus is on reasonable—although higher risk and so potentially not commercially viable—rates of financial return because, according to a 2012 CDC Strategy Presentation, 'losses typically mean no impact'.[62] Investments are focused on building sectors and companies with a high-growth potential and especially a high potential for job creation, which is

[59] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[60] http://www.gatsby.org.uk/africa
[61] http://www.gatsby.org.uk/africa/focus-areas/investing-for-sector-change
[62] http://www.cdcgroup.com/Documents/Additional%20Publications/cdcstrategypresentation_2012.pdf, slide 9.

intended to provide the required positive 'social impact' through multiplier effects. Investments are made across a range of sectors including manufacturing, agribusiness, infrastructure, financial institutions, health, construction, and education. The extent of the positive developmental impacts of the work of the CDC (especially after it was partly privatised) has, however, been questioned by the likes of Mawdsley (2015).

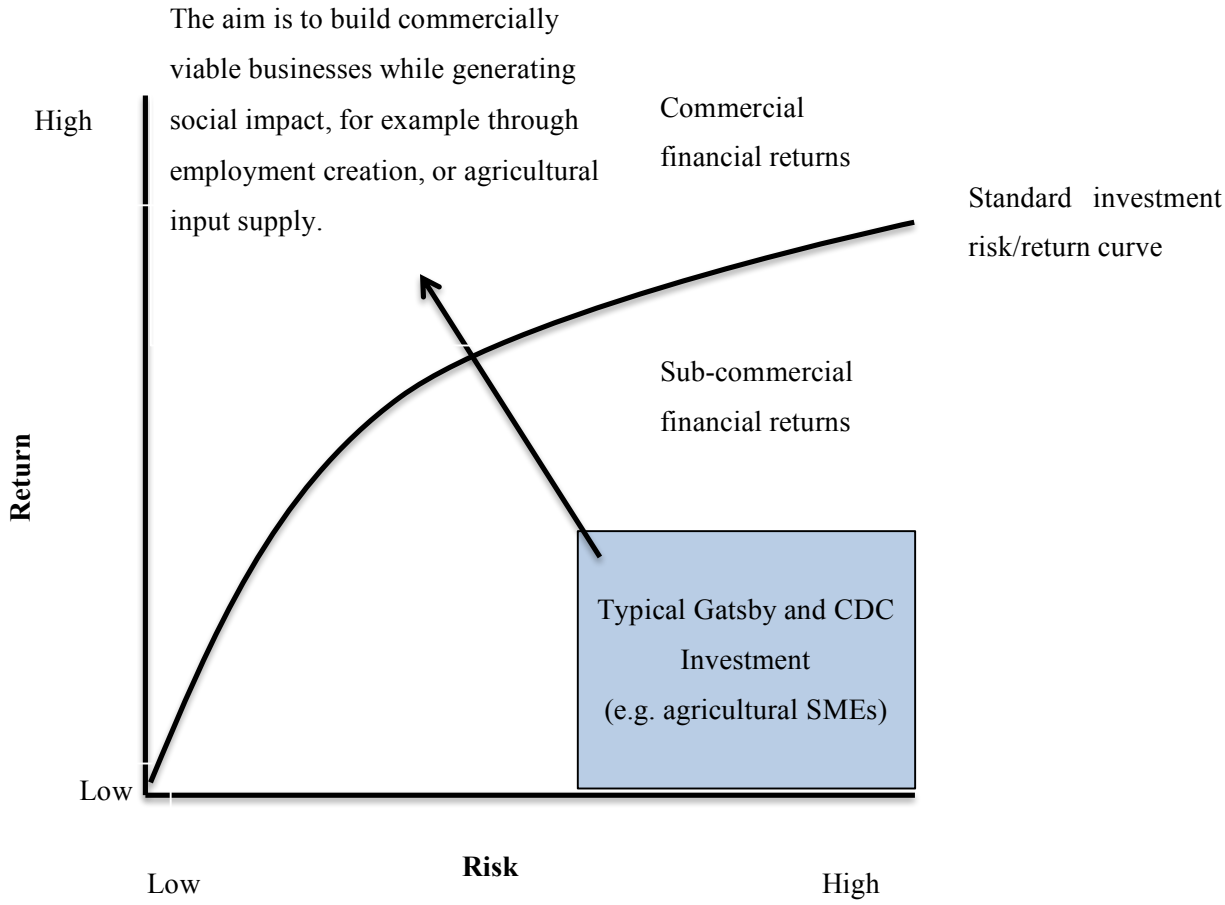

Figure 5.8 Depiction of The Gatsby Charitable Foundation's approach to SII, based on an interview with Investment Director Robert Jenkins.

Rather than seeing SII as a means of producing a profit, these institutions prioritise maximising the social impacts that align with their mission for the capital that they commit. As depicted in Figure 5.8, through SII they intend to mitigate risks in sectors such as agriculture to build commercial viability and leverage further private capital. Ashkan Rahmati from CDC emphasised the importance of developing the investment and business environment to enable greater flows of private capital into the sector: 'we will tend to do things that a commercial private equity shop would stay clear of because of the risk involved. That is because part of the development agenda is to formalise the space that we

have invested in, and help bring commercial capital into that market.'[63] Both Gatsby and CDC see SII with sub-commercial financial returns as a means to de-risk the investment environment, build up businesses to become commercially viable, and create opportunities for investors requiring commercial financial returns and lower risks to move in at a later date to provide financing to expand the sector (see Figure 5.8).[64] Jenkins explains that Gatsby takes this approach because 'there is more finance in East Africa than people know what to do with. It is a case of a lack, and a very severe lack, of opportunity for that finance to be deployed'.[65]

In contrast to the hype surrounding returns-driven impact investment in African agriculture, Jenkins stressed the importance of being realistic when making projections of the financial returns from SII:

> *'We will invest in them [African agricultural enterprises] and we will expect to get some funding back, but realistically for every dollar we put in we are only likely to get 25 cents back. That is fine as long as we can take farmers on a journey from being fairly subsistence-based to being something that is hopefully more impactful on their personal budgets…. You are really operating below the line on the risk-return graph. You are not going to generate risk-adjusted commercial returns. Recognise that and ensure that the impact you want to create is achieved.'*[66]

Alongside private foundations, DFIs, and specialised private equity funds, there has been the proliferation of a variety of hybrid impact investors engaging in the African agricultural sector. These organisations are using innovative business models to channel public and private capital to generate positive social impacts in African agriculture. Some examples are Root Capital, AgDevCo, H2O Partners, and Cheetah Development. Root Capital is a non-profit investment fund that provides loans to businesses in African agricultural value chains that fall between traditional private equity and microfinance investment, with the aim of connecting smallholder farmers to global markets. They understand 'social impact' as the result of, on the one hand, the loans and management training they provide to investee businesses and, on the other hand, the impact of those businesses on the incomes of the smallholder farmers who supply them with produce.[67]

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[63] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.
[64] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[65] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[66] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[67] https://www.rootcapital.org/our-impact

AgDevCo was incorporated in 2009 and invests long-term debt and equity in African SMEs that work with smallholder farmers, with the aim of building profitable businesses operating at a scale that can contribute to food security and employment generation.[68] All profits are recycled into new investments, and their principal funders are public bodies like DFID and private foundations such as the MasterCard Foundation. Their investment criteria are potential for growth, a strong management team, a viable business model, and development impact. H2O Venture Partners is a similar enterprise, but it establishes its own businesses to fill perceived gaps in African agricultural value chains, and invests in those businesses by drawing on a combination of private and public capital.

Cheetah Development also sets up its own businesses that aim to generate social impact by improving smallholder farmer incomes. Cheetah accepts capital as donations and impact investments from public and private accredited investors, and it aims to return a traditional commercial rate of return for those investors:

> *'Cheetah sustains a double bottom line: we improve the livelihoods of smallholder farmers and we make profits. These objectives are not in conflict—instead, they are perfectly aligned. Every partner in a healthy value-chain must add value and receive value. The same is true for smallholders. We do the obvious:* ***End poverty by creating income.*** *'*[69]

Although this section has segmented social impact investors along a spectrum, it is common to find partnerships developing between those pursuing impact-first and those pursuing finance-first investment. Impact investors often target markets and sectors that are risky and expensive to reach and successfully penetrate, and are therefore unappealing to finance-first or traditional investors. In many cases, there is a need for 'patient' capital with return rates longer than traditional private investments to enable risk-taking and scaling of the model to become self-financing (Palmer 2010).[70] This catalytic 'patient' capital can be sourced from government funding in public-private partnerships (PPPs), philanthropy, private equity, high-net worth individual investments, and increasingly also impact-first investors: 'philanthropic capital and commercial capital need to be seen as complementary—the solution lies in mitigating risks so that commercial capital is willing to enter'.[71] This results in so-called 'yin-yang deals' or 'blended finance' investment structures that include investors with different risk tolerances and return expectations (Monitor Institute 2009, p.32; GIIN 2017). The African Agricultural Capital Fund is a partnership between The Gatsby Charitable

[68] http://www.agdevco.com/uploads/reports/AgDevCo_Flyer_2016.pdf

[69] Cheetah Development (n.d) *Solving the Biggest Problem in International Development.* Emphasis in original.

[70] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.

[71] Rodgriguez Arregui, Co-Founder and Managing Partner of IGNIA, a social impact venture capital fund in Mexico, quoted in Milligan & Schoning (2011, p.165)

Foundation, The Rockefeller Foundation, The Bill and Melinda Gates Foundation, and J.P. Morgan, with technical assistance from USAID. The three foundations contributed differing amounts of equity capital, and J.P. Morgan provided debt financing. In this layered structure, the foundations are effectively mitigating the risk by underwriting the commercial loan from J.P. Morgan.[72]

5.5. How is African agriculture constructed as a site for investment?

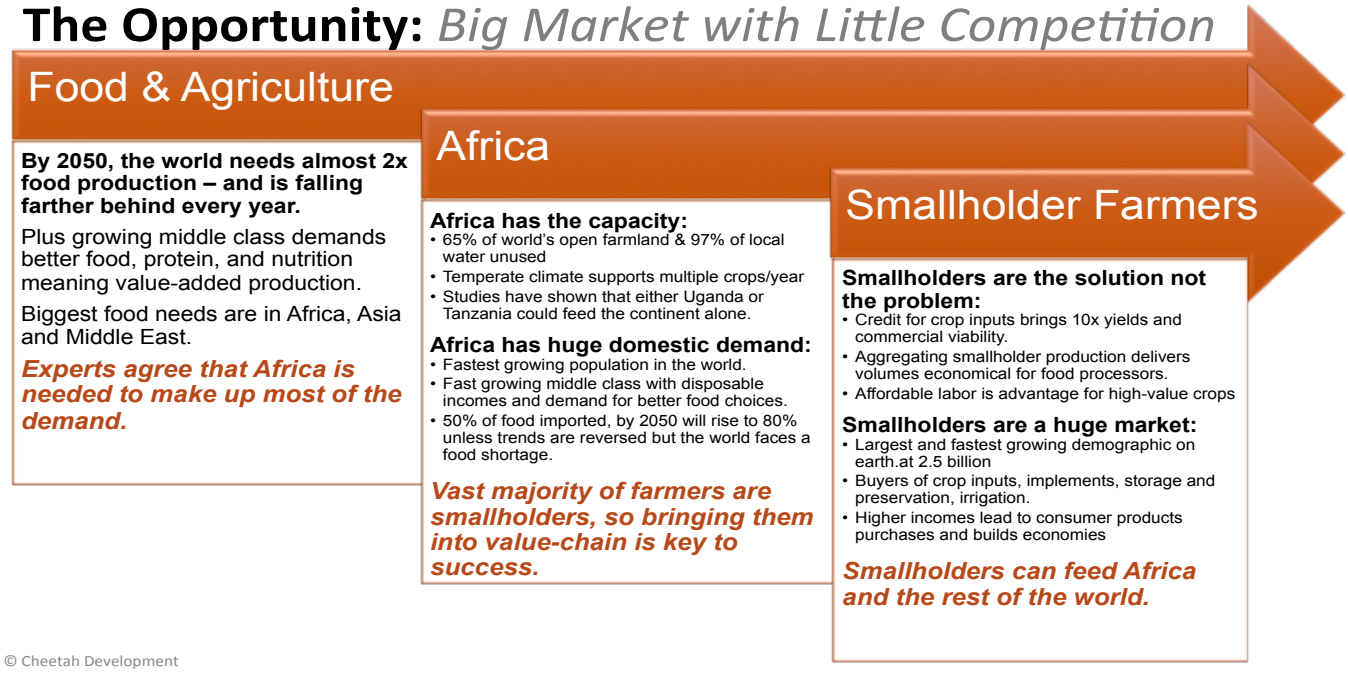

Figure 5.9 Cheetah's perspective on the opportunities in the African agricultural sector.[73]

As the graphic in Figure 5.9 demonstrates, social impact investors' understanding of the challenges facing global agriculture is often based on a well-publicised supply-demand question.[74] The world is facing the 'most certain trend on earth'[75]: a Malthusian 'perfect storm' of a growing population that is rapidly urbanising, with an expanding middle class and associated 'meatification' of diets, and playing out under conditions of climate change and limited land and water resources. The global population is expected to reach nine billion by 2050, and there is a question mark over how to

[72] Interview with Robert Jenkins, Director, African Agricultural Investments, The Gatsby Charitable Foundation, Skype, 27/02/2017.
[73] Taken from Cheetah Development (2016) *Extreme Impact Investing* presentation.
[74] Interview with Edward Agaba, AGRA, phone, 21/11/2015. Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016. Interview with Brad Brown, Senior Vice-President Impact Investment and Philanthropy, Cheetah Development, Skype, 07/10/2016.
[75] Taken from Cheetah Development (2016) *Economics of Rural Poverty and Cheetah's Model* presentation, slide 8.

increase global agricultural productivity by the estimated 70% that is necessary to feed that burgeoning population. The surplus production from major agricultural economies such as the US is declining, and although genetically engineered crops may increase productivity, the bulk of this gap is going to have to be met by the Global South. It is estimated that USD 83 billion needs to be invested per year in agriculture in the Global South to reach global food needs by 2050 (Miller et al. 2010).

Through the agricultural SII narrative, the Malthusian threat of population growth is reworked as a business opportunity, and smallholder farmers themselves are being framed as investable. According to Cheetah founder and CEO Ray Menard, smallholder agricultural development is 'a core international economic problem that is of massive scale'.[76] Cheetah Vice-President Brad Brown echoes this perspective by directly tying together food security, population growth, investment, smallholder farming, and poverty alleviation:

> *'The quantum leaps in agricultural production are going to come from the developing world. They have 2/3 of the world's remaining arable land and they have water… so there is no reason why they can't not only feed themselves but also feed the rest of the world. So you combine that with the fact that the vast majority of the world's poor live in rural areas… if you take those two things, this vast pool of what we call 'hands and lands'—the farmer—and you put it together with the fact that we have got to find a lot more food in the world, that becomes a tremendous business opportunity.'*[77]

Wiebe Boer, CEO of the Tony Elumelu Foundation, notes a corresponding change in the way that agriculture is perceived, from being the domain of government and donor money to 'if you were doing an agricultural strategy now, the primary focus would be getting investors in, domestic or foreign, whether for large or small-scale agriculture, and then the government role is more unlocking, providing incentives *et cetera*. Completely different.'[78] This shift is important, as primary agricultural development has generally not been perceived as a profitable investment option, but rather as being high risk and low return. Investors have instead tended to focus on upstream and downstream opportunities, and it has mainly been governments who have invested in primary production, for instance the national agricultural research stations and subsidy schemes of the first green revolution (see Chapter 2). Although there is still focus on upstream and downstream opportunities, SII is reshaping smallholder agricultural production as a viable business opportunity through its potential to provide both financial and social returns, although at a higher risk. Approximately a quarter of the

[76] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[77] Interview with Brad Brown, Cheetah Development Senior Vice-President Impact Investment and Philanthropy, Skype, 07/10/2016.
[78] Wiebe Boer, chief executive officer of the Tony Elumelu Foundation, quoted in Skoll World Forum (2013)

respondents to the GIIN's (2017, p.24) Annual Impact Investor Survey were planning to grow their proportional allocations to food and agriculture in 2017 (see Figure 5.10).

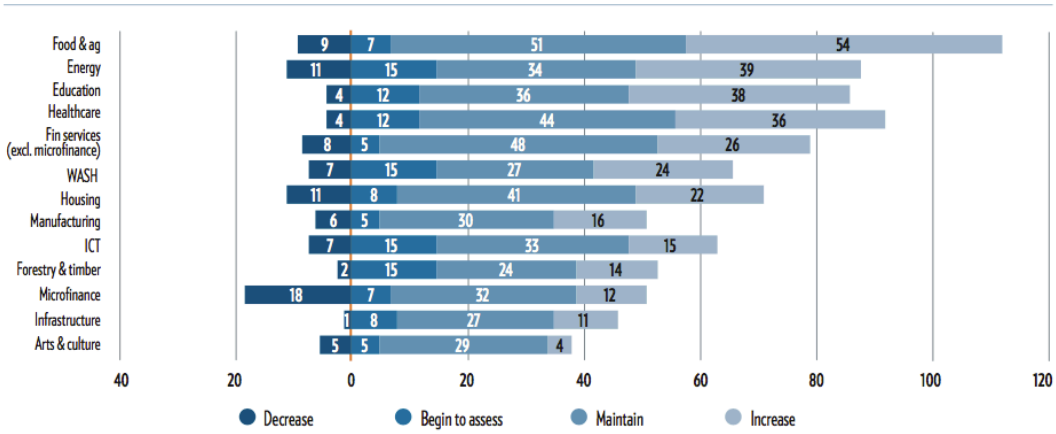

Figure 5.10 Planned proportional allocation changes by sector of respondents to the GIIN Annual Impact Investor Survey, 2017.[79]

Until recently, much attention on agricultural investment potential has been directed at emerging markets, particularly those in Brazil and Asia. Gary Vaughan-Smith from SilverStreet Capital, however, noted that he felt there was a lot of 'smoke and mirrors' around projections of growth in Asia in the late 2000s, and that Asia's growth rates were likely to be unsustainable.[80] He, amongst others, began to look towards some African countries that were at an early stage of development and so their economic growth potential, while not totally immune, was perceived to be largely decoupled from global economic slowdowns: 'we are selling feed and cooking oil and chicks in Tanzania locally, it doesn't really matter if Greece goes bust or China blows up'.[81] Economic growth in these countries is projected to be reasonably high: at least 6% for the next decade (UNDP 2015). Ashkan Rahmati reported that the CDC's African portfolios have outperformed relative to their other emerging market portfolios, and 'there has been a lot of noise around the opportunity in Africa on the agriculture perspective'.[82] David Kelly from H2O Venture Partners echoed this view:

> *'From first principles, the macroeconomic situation [in Africa] suggests that you really ought to be able to [generate social and financial impacts]. Agriculture is a vast part of their GDP, and there is a huge amount of headroom in that sense for growth and a good track record in*

[79] Taken from GIIN (2017, p.24).
[80] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[81] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[82] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.

some countries of strong growth. There are a lot of really obvious gaps in those economies that are begging for enterprises to fill'.[83]

As described in Chapter 2, investment in African agriculture is not new, but from the late 2000s it has drawn the attention of investors looking for opportunities in SII. The potential for profitable investment is framed in a report by the Project Terragua working group reporting to the GIIN: 'it should be clear that not only is food/agro-industrial production in Africa going to become a major opportunity for the international investor in commercial agriculture, it could also be a very profitable opportunity: and especially so where market chain added value is possible' (Riddell 2009, p.8). Figure 5.11, taken from reports by the social impact measurement initiative IRIS, shows how the number of SII organisations as a whole has almost doubled over this period, incorporating a growing range of sectors and regions. Agriculture continues to be the second largest sector for SII organisations after financial services, and the number of SII organisations in agriculture in SSA more than doubled from 2011 to 2015. These data, however, only takes into account the organisations that voluntarily reported to IRIS.[84]

[83] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.
[84] Top taken from IRIS (2011). Bottom taken from IRIS and GIIN (2015).

	EAST ASIA & PACIFIC	EUROPE & CENTRAL ASIA	LATIN AMERICA & CARIBBEAN	MIDDLE EAST & NORTH AFRICA	NORTH AMERICA	SOUTH ASIA	SUB-SAHARAN AFRICA	TOTAL
AGRICULTURE	11	9	167		–	–	62	265
ARTISANAL	4		7		–	–	3	–
EDUCATION	–	–						–
ENERGY	46	–	–			11	36	106
ENVIRONMENT	–	–				–		–
FINANCIAL SERVICES	256	399	446	75		327	438	1,941
HEALTH	3	–	3				–	11
HOUSING DEVELOPMENT			–					–
INFORMATION AND COMMUNICATION TECHNOLOGIES	–	–	–				–	7
INFRASTRUCTURE/FACILITIES						–		–
SUPPLY CHAIN SERVICES	–							–
TECHNICAL ASSISTANCE SERVICES						–		–
TOURISM		3	3					6
WATER	–					–	–	5
OTHER	8	10	5			4		27
TOTAL	335	429	646	75	10	355	544	2,394

	EAST ASIA AND PACIFIC	SUB-SAHARAN AFRICA	SOUTH ASIA	EUROPE AND CENTRAL ASIA	LATIN AMERICA AND THE CARIBBEAN	NORTH AMERICA	MIDDLE EAST AND NORTH AFRICA	TOTAL
AGRICULTURE	18	141	14	17	293	34	3	520
ARTISANAL	4	--	3	4	14	8		33
CULTURE				--	15	11	--	26
EDUCATION	--		--	--	5	34		39
ENERGY	48	32	14	3	17	9		123
ENVIRONMENT	--			--	9	48		57
FINANCIAL SERVICES	361	598	406	443	518	542	81	2,949
HEALTH	3	10	8	4	21	27	--	73
HOUSING DEVELOPMENT		--	5	--	5	31		41
INFORMATION AND COMMUNICATION TECHNOLOGIES	11	46	16	8	50	64	4	199
INFRASTRUCTURE/ FACILITIES DEVELOPMENT	--		--	--	7			7
OTHER	12	12	30	14	104	51	9	232
SUPPLY CHAIN SERVICES	4	--	3	--	12	78		97
TECHNICAL ASSISTANCE SERVICES	--		--	4	15	139		158
TOURISM	--			4	4	9		17
WATER	3	--	--		--	4		7
TOTAL	472	844	505	510	1,091	1,089	100	4,611

Figure 5.11 Organisations reporting to IRIS, by sector and region. Top: 2011. Bottom: 2015.

Since the late 2000s, there has been much hype and a proliferation of corporate literature presenting African economies as 'lions on the move' and discussing how 'Africa is rising', meaning that companies need to act quickly to avoid missing out on the benefits of investment (e.g. Roxburgh et al. 2010; Renaissance Capital 2011). As mentioned earlier, demographics are key to this trend. Across the continent the population is growing by 2.5% per annum, and by 2025 Africa's population is expected to be the youngest in the world, creating an expanded sector of working age people.[85] Many African nations are also experiencing an expansion of the middle class, which is in turn enjoying boosted disposable incomes. Urbanisation rates are high, with an estimated 50% of Africans living in cities by 2030 (Roxburgh et al. 2010). This introduces the challenge of feeding a rapidly expanding urban population and catering for changing diets, as an example there is already a shift in preferences from maize for *ugali* to wheat for bread in urban areas in East Africa.[86]

In some (but not all) African countries the regulatory environment has also changed to become more accommodating to private sector investment in agriculture. African governments therefore play key roles in constructing sites for investment. Previously volatile countries like Rwanda have become more politically stable, and the likes of South Africa, Burkina Faso, and Egypt have removed restrictive regulations on the commercial production of genetically engineered crops, and have encouraged cultivation for biofuel production. Many African governments have recognised the potential of private sector investments for national economic development and, often with the support and encouragement of organisations like the WB, have introduced policies and institutions to encourage this process. Examples are the creation of high-profile agricultural growth corridors in Mozambique and Tanzania as focal points through which to assemble actors with the aim of generating agricultural development. As discussed in Chapter 2, through the Southern Agricultural Growth Corridor of Tanzania (SAGCOT), the Tanzanian government has embraced the role of private sector investment in driving agricultural development. Alum Shante, Chairman of the Agricultural Council of Tanzania, stated that 'the agricultural potential of the southern corridor is enormous, but remains largely dormant or highly underexploited. Serious market opportunities for agricultural produce abound. It is time for the agricultural Sleeping Giant [Tanzania] to awake' (Kilimo Kwanza Executive Committee 2013, p.12). This has led to concerns about the implications of the 'foreignisation' of space, and the outsourcing of agricultural development to the private sector. Figure 5.12, taken from a SAGCOT policy document, depicts how the Tanzanian government is constructing

[85] Interview with Ponmile Osibo, Manager Research and Training, AVCA, phone, 18/05/2016.
[86] Interview with Ponmile Osibo, Manager Research and Training, AVCA, phone, 18/05/2016.

the Southern Highlands as a site for investment by comparing some key features with a productive agricultural zone in Brazil.[87]

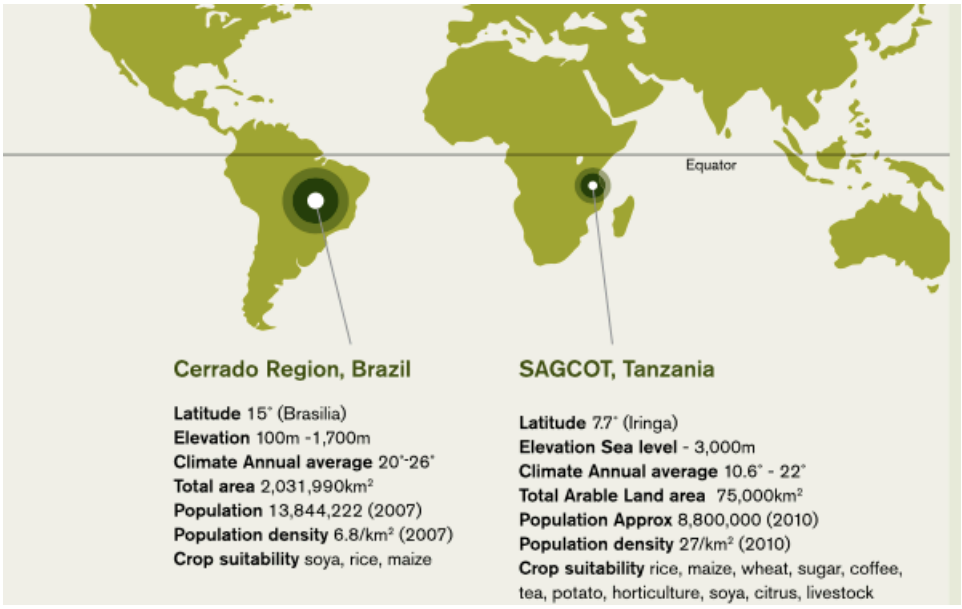

Figure 5.12 Map comparing key features of agricultural zones in Tanzania and Brazil.

Political concerns also pervade the SII narrative through the relationship between food insecurity and instability. Political concerns were apparent in the Cold War narrative that a hungry peasant is a revolutionary peasant, and are replicated today by social impact investors. Cheetah Development's (2016) *Extreme Impact Investing* presentation, for example, states that 'either smallholders succeed or hunger, poverty, and instability increases in more than Africa'.

Along with demographics and shifting politico-economic climates, certain African countries are attractive to investors due to perceptions of land availability and productivity potential. Globally, it is estimated that there is only 12% more land available for conversion to agricultural production without significant deforestation, and it is estimated that 60% of this uncultivated arable land—the 'final frontier'—is on the African continent (Roxburgh et al. 2010).[88] According to Susan Payne from Emergent Asset Management, Africa is the 'one continent that remains relatively unexploited' in terms of agricultural production potential.[89] Whether this perception is borne out in reality, however, is a matter of great debate. Despite being a major reason behind the failure of the first green

[87] Taken from Kilimo Kwanza Executive Committee (2013, p.24). Note that Iringa, where I conducted this fieldwork, is the pilot cluster of the SAGCOT and located at its centre, as demonstrated on this map.
[88] Interview with Ray Menard, CEO and Founder, Cheetah Development, Skype, 17/05/2016.
[89] Susan Payne from Emergent Asset Management, quoted in Rice (2009)

revolution (discussed in Chapter 2), the agro-ecological diversity found in Africa is reframed and 'rendered technical' in the SII discourse as an investment opportunity.

There is a band running from West to East Africa broadly along the same latitude as Brazil called the Guinea Savannah that can support a wide variety of potentially profitable crops: on the plateau grains and soya are highly productive, tea can be grown at high altitudes, and the equatorial region is suitable for rubber and palm oil.[90] Figure 5.13 demonstrates how organisations like the WB are promoting investment in the Guinea Savannah, which is estimated to include 600 million hectares, 400 million of which are deemed farmable (World Bank 2009). What is striking in this map is how diverse political, economic, and social contexts are grouped together under the banner of the Guinea Savannah. The SII discourse therefore simultaneously embraces African agro-ecological diversity while homogenising political, economic, and social differences.

Figure 5.13 Depiction of the Guinea Savannah.[91]

[90] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[91] Taken from World Bank (2009)

As well as contributing to solving the global supply-demand gap, investments in African agriculture also provide many opportunities for the generation of social impacts at a local level due to the large proportion of the population that is involved in smallholder agriculture. In fact, the WB economist Deininger (2011) writes that SSA countries represent the most appropriate 'country type' for outside investment to foster local development. Parallel to the literature on 'Africa rising', and often evident within the same documents, there is a continued narrative of Africa in need of 'help' to modernise and improve standards of living in order to 'catch up' with other emerging economies. One expression of this is through providing financing for agricultural development, which is thought to play a critical role in reducing poverty and fostering economic development more broadly. Michael Dean from AgFunder stressed the importance of the developmental motivation for investing in African agriculture: 'I think it is probably driven by the number of famines in Africa. It is very in your face. People are like crikey we have to do something about Africa, we really have to help people'.[92]

This depiction of the continent is similar to that which can be found in earlier, moralistic development narratives of Africa as a 'dark continent' lagging behind the Western countries and in need of a 'civilising' mission to bring about progress and modernisation. Menard from Cheetah Development argues that more investment, and more 'intelligent' investment, is needed to bring about agricultural development as 'the ability for the continent to feed itself is not in doubt, and to feed the world is possible, but it is actually heading in the opposite direction. It is putting a lot more land into use, but it is producing less per acre over the last 50 years, which is really disgusting when you think about it.'[93] Vaughan-Smith from SilverStreet Capital also depicts 'Africa' as lagging behind the rest of the world through following 'wrong' cultivation methods:

> *'if you look at small-scale and commercial farming there is a big difference in yields. He's [smallholder farmer] got weeds, stunted growth, he is using the wrong seed, he is probably replanting food rather than hybrid seed, he's not planting in rows so he can manage the weeds, he has planted late probably.'*[94]

Menard and Vaughan-Smith both highlight that productivity is lagging in Africa despite the technology advancements over the past half-century, such as the green revolution (see Chapter 2). Narratives of 'yield gaps' backed up by statistics and maps of untapped opportunities assemble African agriculture as a sector ripe for investment in order to reach its potential. The solutions that tend to be provided by social impact investors are technocratic as, according to Vaughan-Smith, 'it's a

[92] Interview with Michael Dean, Co-Founder, Agfunder, San Francisco, 29/03/2016.
[93] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[94] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.

logistical thing' (see Chapter 6 for a case study).[95] These solutions include the provision of high quality seed and fertiliser, agronomic education, and access to markets. This analysis, however, lacks a coherent theory of change as to how increased investment leads to enhanced agricultural productivity. Furthermore, as the solutions being proposed are similar to those used in the first green revolution, for example high quality agricultural inputs and market access, questions remain as to why this approach will succeed when previous efforts did not.

The story of 'Africa rising' dominated depictions of the continent in investment circles from around 2005 to 2015. From late 2015, however, there has been a marked shift in how 'Africa' is perceived as an investment location. The late 2000s and early 2010s saw a rapid proliferation of funds and corporations focused on African agriculture, but quite a few investors have been 'burnt' and a lot of money has been lost.[96] It has been suggested that the investment potential in Africa may have been oversold, as the continent appeared to sail through the financial crisis due to the large-scale writing off of debt through the HIPC process in the mid to late 2000s.[97] Projects have failed due to a variety of factors that include unforeseen issues relating to religious and political instability, limited market opportunities, poor financial or infrastructural ecosystem, a lack of regional coordination, and currency volatility.[98] As an example, SeedRock, a natural resources social impact investor in emerging markets, pulled out of a cooking oil project in Burkina Faso—where they had leased 43,000 acres and built a processing plant—due to a political coup and resulting instability.[99] There have also been issues relating to a lack of specialist investment management expertise on African agriculture and unwise capital deployment strategies. This has led to a growth in scepticism surrounding SII in African agriculture:

> *'So even though the opportunity is massive, which it is because looking at it from a 5000ft above the ground perspective you think oh my god this sunshine, rainfall, and abundance of land, the opportunity is massive, but it really isn't that simple. Only once you've invested do people realise how problematic it can be.'*[100]

[95] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[96] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.
[97] Alan Cameron, Exotix, Private Equity Africa Summit, London, 9th June 2016.
[98] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.
[99] Interview with Michael Dean, Co-Founder, Agfunder, San Francisco, 29/03/2016.
[100] Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.

The number of new actors aiming to invest in Africa is still increasing, but raising and deploying capital is more challenging as investors are becoming more cautious and selective.[101] While there is a general consensus that the 'Africa rising' story remains relevant in terms of both financial and social impact potential and portfolio diversification, there is an emerging narrative of differentiation in both risk and rewards. There is increasing recognition that within Africa there are countries with different levels of economic development, as well as differing degrees of currency volatility, business environment, political stability, land rights, infrastructural development, and deal flow opportunities. Arguably this shift in narrative is beneficial because it helps to 'clean up' the investment landscape, encourages investors to take the time to build relationships with the host government and local communities, and to start small to build capabilities before expanding.[102] The volume of returns-driven capital flowing into African agriculture has been lower than the hype would suggest, and questions have been raised about the uncritical 'win-win' rhetoric. David Kelly from H2O Venture Partners explains that:

> *'There has not been much returns-driven money. I think that whilst in principle we all want that to happen it hasn't really happened. Nobody is going to say from primarily a returns perspective that they are going to invest in businesses that service smallholder farmers in East Africa. They will build an office block in Reading or something. We are where we were 5 to 10 years ago still. All of the pie in the sky ideals of the early movers in impact investment that you can actually make more money by being impactful and it should be a returns-driven thing, I just don't see that having any traction.'*[103]

Within this more differentiated approach to investment in African agriculture that takes local context into account, the methods by which individual investors identify target countries are varied, and combine both objective and subjective elements. For Cheetah Development, the decision to begin work in Tanzania was 'half coincidental and half intentional'.[104] Menard first eliminated South and Central America on the grounds that they were 'already so far ahead of much of the world it seemed like I didn't need to be there'.[105] For reasons he couldn't explain, Asia did not hold much of an attraction to him, and therefore it seemed to him that 'Africa was the game'.[106] Within Africa, his primary criteria were a long history of political stability and surrounding opportunities for expansion. This narrowed it down to Ghana and Tanzania. He had already been to Tanzania and so decided to

[101] Daniel Schoneweld, Principal at Hamilton Lane, Private Equity Africa Summit 9th June 2016.
[102] Daniel Schoneweld, Principal at Hamilton Lane, Private Equity Africa Summit 9th June 2016. Interview with Ashkan Rahmati, Investment Executive, Private Equity Team, The CDC Group, London, 04/05/2016.
[103] Interview with David Kelly, Managing Partner, H2O Venture Partners, Skype, 15/03/2017.
[104] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[105] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[106] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.

begin there. This demonstrates that behind the business rhetoric there is also a personal and subjective element to identifying locations for investment. Menard stated that with hindsight Ghana might have been a more appropriate starting location, as he believes Tanzania still suffers from a 'socialist hangover' in terms of general attitudes and central planning.[107]

By contrast, SilverStreet Capital has a complex method for identifying locations for investment: 'we score countries, and they don't all pass. If you are going to bring institutional money you have got to be absolutely rigorous. Take them to the better countries'.[108] To assess and compare countries SilverStreet Capital uses five factors based on rankings drawn up by other organisations, for example the WB. These five factors are ease of doing business, credit risk, war risk, corruption, and risk of appropriation. They also look at population growth, GDP growth, agro-ecology, land availability, and the political context, for example incentives for foreign investment and the potential for protectionism and market interventions. Vaughan-Smith explains the reasoning behind how SilverStreet Capital identifies locations for investment as:

> *'there are certain clusters of countries that are likely to be of reasonably high growth. If you add some of what I call 'better' countries—Zambia plus Mozambique plus Tanzania—you get about Brazil's land availability. Your constraints are water, land, and to a certain extent climate change can constrain you by making it more volatile. Then your drivers are population, changing eating habits, and that has a multiplier effect. So if we go to Tanzania, it is an interesting investment target: over 50m people, 6-7% GDP growth for over a decade now, and they haven't started the gas yet. Governance is ok.'*[109]

This produces a list of so-called 'better countries', and from that list it is a subjective decision as to which countries to invest in. They re-score countries every year, which has allowed for countries like Rwanda to rise up the ranking over the past five years, while Kenya has declined partly due to the rise of Al-Shabab activities. Vaughan-Smith explains the benefits of this method as:

> *'what is nice is we can rank any country in the world. The interesting thing is you can then compare with Brazil, India, or Romania, and the better countries are the same score as Brazil really. And that process screens out certain countries in an obvious way. So Zimbabwe is not investable, and Somalia, Congo, and Burundi get screened out. Below a certain number we just say no, and above we say ok that is investable, but there is still a subjective aspect.'*[110]

[107] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[108] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[109] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[110] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.

These selection mechanisms are creating notions of ‘good’ and ‘bad’ countries for SII, and are resulting in the clustering of investments into countries that possess characteristics perceived to be advantageous. These advantageous characteristics include abundant water and land resources; appropriate agro-ecology for the production of higher value crops; a government that is stable and actively providing an enabling environment for investment; low production costs; low currency volatility; and a well-developed transport and communications network. This has created an uneven regional geography with particular countries dominating investment flows in each region, for example Kenya in East Africa, Nigeria in West Africa, and South Africa in Southern Africa. The uneven way in which African countries are perceived by private equity investors in general is shown in Figure 5.14.

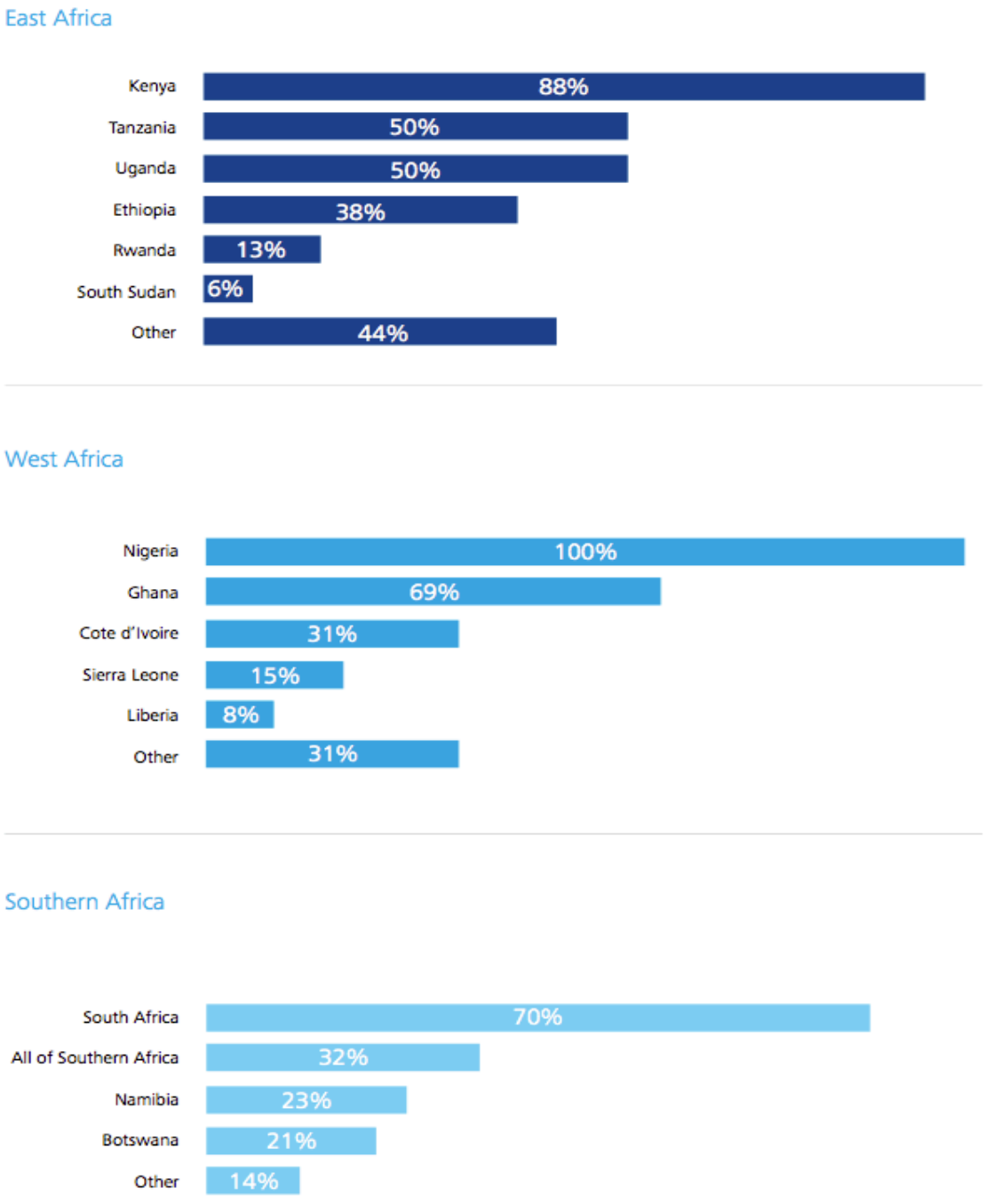

Figure 5.14 Graphical depiction of answers to the question 'which countries do you expect to invest in over the next 12 months' that was asked by Deloitte to 117 private equity funds investing in Africa.[111]

Focusing on East Africa, Kenya is the regional hub and has received three times more impact investments than Uganda or Tanzania (GIIN 2015). Although Ethiopia currently has the highest rate of economic growth in the region, it has only received 7% of investment deals, largely due to its complex regulatory system that restricts business ownership and profit repatriation by foreigners

[111] Taken from Deloitte and SAVCA (2015, p.15)

(GIIN 2015). The GIIN found negligible evidence of impact investments in countries struggling from internal conflict, for example Burundi and South Sudan. As it currently has a less competitive investment environment than neighbouring Uganda and Kenya, Tanzania is becoming attractive to impact investors, particularly in agriculture (GIIN 2015). Tanzania is also seen as having advantageous agro-ecological conditions, for example the second largest volume of inland fresh water resources in Africa, with only 1% of total irrigable land currently fully utilised (Kilimo Kwanza Executive Committee 2013).

There are, however, many challenges that are limiting the flow of SII capital to Tanzania. It has a notoriously poor transport infrastructure, a history of unpredictable government intervention, a lack of transparency surrounding land rights, and inadequate access to finance. Moves have been taken to reassure investors by, for instance, the establishment of the SAGCOT that aims to mitigate risks through public-private partnerships (introduced in Chapter 2), and the Tanzania Investment Centre that provides information and facilitates investments (Kilimo Kwanza Executive Committee 2013).

It is also common to find an uneven geography of investment within countries. Clusters form along transportation links or near major cities, in comparison to potentially more volatile border areas, or due to initiatives like agricultural growth corridors where large areas of land are identified for investment opportunities. Figure 5.15 provides an example of this internal clustering in the context of land deals in Tanzania. Clustering can clearly be identified along the infrastructural backbone from Dar es Salaam on the coast to Iringa in the Southern Highlands, and this is the same infrastructure that provides the focus point for the SAGCOT.

Figure 5.15 Map depicting all land deals (excluding mining) in Tanzania, 2016.[112]

[112] Taken from http://www.landmatrix.org/en/announcements/2016/12/.

5.6. Summary

SII has a long heritage, but its expansion since the late 2000s has been driven by a combination of factors. Firstly, the financial crisis prompted a search for new profitability frontiers and investment opportunities. Secondly, investors began to recognise the risk-mitigation and business case for not only conducting due diligence on ESG issues, but for operating with an intention of generating positive environmental and social impacts as well as financial returns. Thirdly, the financial crisis also stimulated a moral crisis, and the production of a sector of unemployed fund managers who wished to repurpose their skills for 'doing good'. This has resulted in the rise of the 'Friendly Capitalist'. Finally, in the face of declining public funds for development, donors and foundations began to look to financial models which hold the possibility of accessing much larger stocks of private capital, as well as the opportunity to get some of that capital back as a financial return that can be reinvested. The result of these four drivers is that SII is characterised by incoherence in terms of the actors involved, and their motivations, activities, and expectations.

Within the SII discourse, there is a lack of clarity over how 'social impact' is defined, understood, and measured; this debate is imbued with moralistic judgement and priority setting. Although social impact investors are united around the belief that more ethical socio-economic relations can be built, currently there is no coherent vision of what this might look like, how to achieve it, or how to evaluate positive social impacts. Questions remain over where social impacts occur, who experiences these social impacts, and who defines what a social impact entails in a particular context. Debate continues over the merits of measuring social impacts at all. Social impacts can take multiple forms, some of which are tangible and quantifiable, but for others this is more challenging. Social impacts include employment provision, empowerment, increased agricultural productivity, increased wellbeing, access to clean water, and community development. Social impact goals are often associated with a theory of change that details the expected multiplier effects. These theories of change, however, tend to lack a thorough consideration of underlying factors contributing to social problems, and risk ignoring reasons why previous development interventions have failed and how a social impact investment is likely to do much better. This creates the possibility of fragility in SII assemblages, and the potential for disruptions and unexpected outcomes (see Chapters 6 to 8 for a case study).

There have been attempts to create standardised and institutionalised metrics and frameworks to discipline social impact investors into particular ways of understanding and measuring social impact, for example IRIS and GIIRS, but these remain controversial and uptake has been limited. Measuring and monitoring social impact is time, money, and effort consuming, and for some impact investors

and businesses it can represent a commercial inefficiency. Debates continue over the importance of measuring 'soft' development indices, for example empowerment and gender equality, over easily quantifiable and comparable measures. This raises questions over whether there really is a practical difference between conventional investing and some manifestations of SII.

Agriculture is appealing to investors based on a Malthusian supply-demand question of how to feed the global nine billion people by 2050 under conditions of the 'perfect storm' of climate change, population growth, urbanisation, and changing diets. This context, plus the food price hikes in the late 2000s, shifted the risk-return equation making agriculture an attractive site for investment. Since it is generally perceived to have 'missed' the first green revolution, Africa is portrayed as the location where the largest increases in agricultural productivity—and therefore profits and social impact—are likely to occur. This has been manifested through calls for a 'new green revolution for Africa'. Depictions of Africa within the SII discourse, however, tend to embrace agro-ecological diversity while simultaneously ignoring social, political, and economic diversity. Africa is particularly appealing to investors for four main reasons:

- Demographics: high population growth and urbanisation rates;
- Politics: improved political context and regulatory frameworks that often incentivise foreign investment;
- Agro-ecology: underutilised land and water resources with the potential to grow high value crops;
- Social impact: contributing to overall food supply and generating local positive impacts for smallholder farmers.

This has led to a dual narrative of 'Africa rising' and 'Africa in need of help' that justifies SII in African agriculture. Recently, the 'Africa rising' narrative has been tempered by reports of failed projects and multiple obstacles to investment in some sectors and countries. Investors are beginning to approach the continent with a greater degree of scepticism and selectivity, leading to the production of uneven geographies of investment both between countries and within them.

The following chapters will explore a case study to investigate how the financial models, motivations, and models of SII are touching down in the Tanzanian agricultural sector. I ask to what extent assumptions of ethical capitalism embedded in SII financial models and are aligned with smallholder farmer livelihoods and moral economies.

6. Social impact investing in Tanzania

6.1. Introduction

Social impact investors are united around a commitment to generate positive social impacts as well as financial returns, and the general belief that through this a more moral capitalist economy can be built. Beyond this, however, social impact investing (SII) is characterised by diversity and ambiguity in terms of the actors involved, how they aim to implement SII, how they balance social and financial impacts, and their expectations of achieving these over particular timeframes.

This chapter furthers this analysis by examining how SII—and its models and morals—travels to the Tanzanian agricultural context and is translated into practice by particular actors. I explore an institutional assemblage in the Tanzanian agricultural sector that involves a variety of actors linked by the shared aim of increasing smallholder farmer agricultural productivity to boost local incomes, alleviate rural poverty, and increase food security, all while delivering financial returns for investors. I then focus on Cheetah Development (henceforth 'Cheetah') as a node through which smallholder farmers interact with finance and are enrolled into the SII assemblage.

Cheetah is a social impact investor and 'farmer services provider' headquartered in Minnesota, USA, that started operating in Iringa in 2009. Cheetah diagnoses the challenge of agricultural development in Iringa Region as twofold: a 'lack of economy' and problematic farmer mindsets. By reframing agricultural development as a business issue, Cheetah positions the private sector—and particularly SII—as the solution by filling gaps in agricultural value chains. In particular, it diagnoses major obstacles in the form of *dalali* (traders, agents, middlemen) and crop wastage. Cheetah proposes to build more a more ethical capitalism in the form of the Pearl Foods programme. I unpack two key aspects of this model that Cheetah presents as being particularly significant to the success of the operation: loan repayment and credit assessment. Finally, the chapter explores some assumptions embedded in the Cheetah model. These include its conception of the market as both the problem and the solution, and a clash between emphasising entrepreneurship while enforcing paternalistic discipline. These issues will be taken up empirically in Chapter 8.

6.2. An institutional assemblage of SII in the Tanzanian agriculture sector

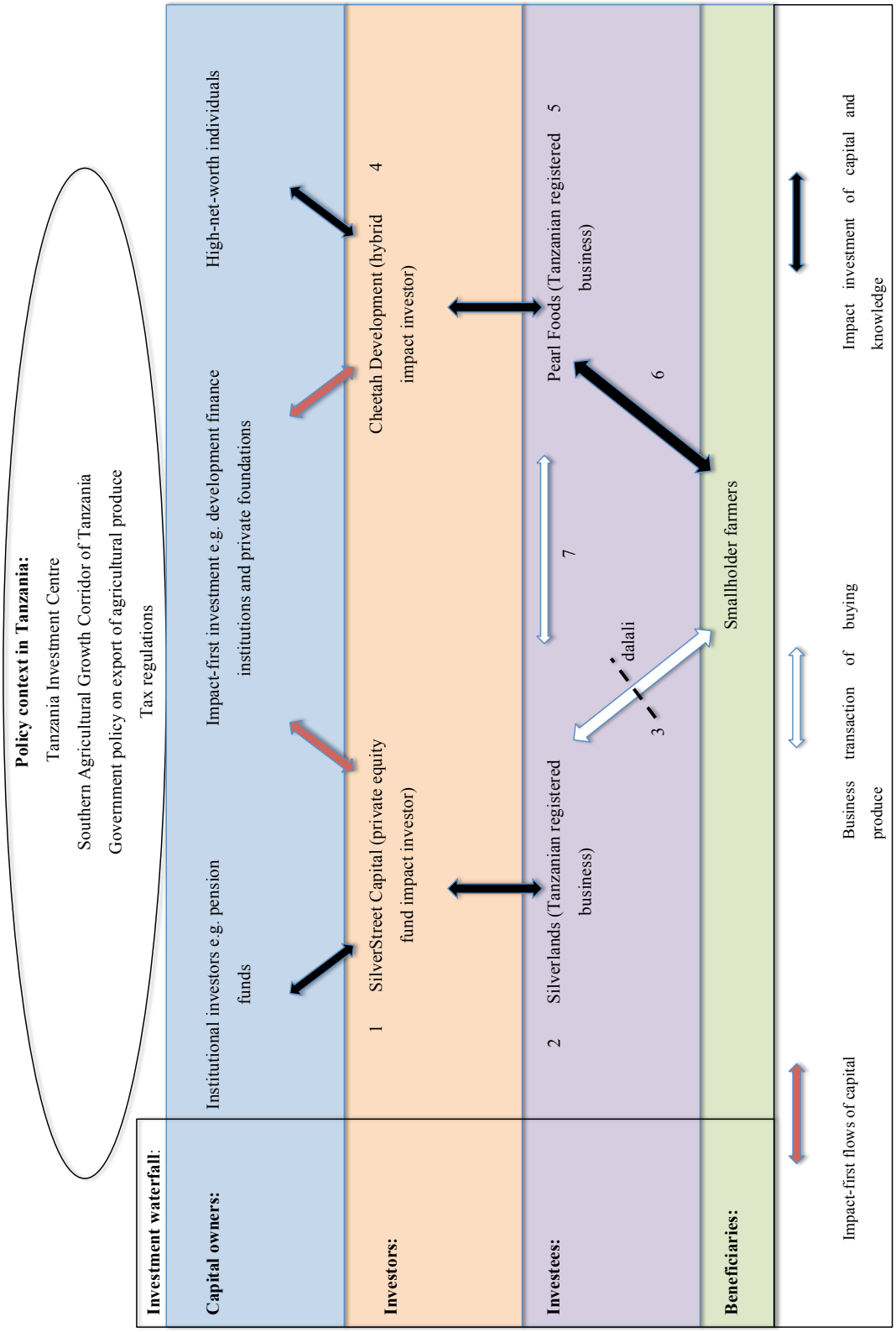

Figure 6.1 An SII institutional assemblage in the Tanzanian agricultural sector.

Figure 6.1 depicts an assemblage of agricultural SII institutions in the Iringa Region of Tanzania, and the relationships between them. All the actors depicted (with the exception perhaps of the *dalali*) have an explicit intention to generate positive social impacts for smallholder farmers as well as financial returns through building more ethical capitalist relations. How they understand what this entails, and how they go about achieving it, however, differ.

SilverStreet Capital, introduced in the previous chapter and located at number 1 on Figure 6.1, is a private equity asset management firm that specialises in SII in African agriculture. The firm was founded in 2007 by Zimbabwean–born Gary Vaughan-Smith, and was named after Silver Street in Cambridge, UK, where he previously studied. Their headquarters are in London, but they also have offices in Zimbabwe and South Africa. The decision to specialise only in agriculture was made in 2009 straight after the financial crash and food price hikes. After decades of working as a trader for pension funds, Vaughan-Smith was interested in setting up a firm focused on SII:

> *'I am not a farmer at all. I do finance, but I also wanted to do something where there is kind of a multiplier effect. A lot of my career has been trading, so buy BP and sell Shell and then buy Exxon… so you are just trading. You are making a return, but you are not necessarily creating anything.'*[113]

Vaughan-Smith felt that by channelling investment into African agriculture there was an opportunity to achieve both promising financial returns and positive social impact; in other words, a more productive moral economy beyond simply trading. He felt that African agriculture was an interesting sector for institutional investors, such as pension funds, to invest in at this time. Institutional investors are deep-pocketed, often have long time horizons on investment, and are facing pressure from limited partners and shareholders to invest in an ethically responsible manner. SilverStreet is unusual in terms of private equity firms investing in Africa, as only 17% of its capital comes from donors and DFIs like CDC and FinnFund, with the rest originating from institutional investors that do not have a requirement to invest for social impact in African agriculture.[114] This demonstrates how SilverStreet has managed to leverage a multiplier effect on public investments to bring commercial capital to African agriculture. Most private equity funds investing in Africa have the opposite funding structure with around 80% of capital from DFIs or other donors.

SilverStreet's largest fund to date, the African Agriculture Fund, closed for investors in 2015, and they are now in the management phase with investments spread across the value chain and exit planned for 2020/21. In Tanzania, this investment is channelled through the Tanzanian registered

[113] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[114] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.

business Silverlands Tanzania Limited that produces high quality day-old chicks and chicken feed for domestic sale (number 2 on Figure 6.1). Maize is a major input (70%) in the chicken feed, and therefore Silverlands is rapidly becoming one of the largest market buyers of maize in Tanzania, with a current storage capacity of 12000 tons. Silverlands runs five large-scale farms across the Southern Highlands and is headquartered in Iringa.

With Silverlands' explicit SII motivation to generate positive social benefits for smallholder farmers and the rural economy, and as a large foreign investor in the agricultural sector, the operation has been identified as a flagship operation by the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) (see Chapters 2 and 5). Involvement in the SAGCOT is intended to benefit the likes of Silverlands through financial support and assistance in building market linkages with smallholder farmers and other enterprises: 'our objective is to foster inclusive, commercially successful agribusinesses that will benefit the region's small-scale farmers'.[115] Silverlands staff, however, reported that they have not received any benefits from their association with the SAGCOT, and instead it has involved only tours and meetings.[116] Janet Sanders, Silverlands Compliance Manager, stated that:

> *'they [SAGCOT] say that first of all they are there to support investors, but by doing what? We are fighting with the villagers on our own, we are fighting the seed companies. We have not been given the help we would have expected from the SAGCOT. As a social impact investor in the country, we think SAGCOT should be helping us. On the other side, SAGCOT say that they want to support the smallholder farmer to find markets. Now ok they have found a market, we are the market, now go and give some support to these guys.'*[117]

From the perspective of SAGCOT Ihemi Cluster Coordinator Ferdinand Mgaya, however, the 'SAGCOT is an initiative, it is not a project neither a programme. You might have heard of SAGCOT, but actually sometimes when you read and then go down on the ground you see some minor differences. Dealing with the private sector sometimes is tricky'.[118] While Silverlands has certain expectations of the SAGCOT as playing a role in financial support and building market linkages to facilitate SII, the SAGCOT is positioning itself instead as a referral and lobbying agency. These unmet expectations and jarring understandings of the roles of different actors introduce fragility and areas of weakness into the SII assemblage.

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[115] http://www.sagcot.com/

[116] Interview with Janet Sanders, Compliance Manager, Silverlands, Iringa, 03/12/2015.

[117] Interview with Janet Sanders, Compliance Manager, Silverlands, Iringa, 03/12/2015.

[118] Interview with Ferdinand Mgaya, Ihemi Cluster Coordinator, SAGCOT Centre, Iringa, 19/08/2016.

To generate positive social impacts, Silverlands engages with smallholder farmers in two major ways (number 3 on Figure 6.1). Firstly, they provide high quality day old chicks and chicken feed with the aim of developing the local poultry industry. Secondly, they purchase maize and soy from smallholder farmers, which they use as inputs to mill chicken feed. Almost 100% of the maize (about 6000t in 2014–2015) purchased for the chicken feed mill is produced by smallholder farmers. The price paid for the maize is better than average for the Southern Highlands: USD 500/t compared to the average market range of USD 150/t to USD 300/t as of May 2016.[119] Silverlands aims to generate positive social impacts by providing a market for smallholder farmer agricultural produce at a good price, and their profit is made further down the value chain when they sell on the processed chicks and chicken feed. Silverlands buys produce all year round, and is willing to take maize of lower quality that that deemed acceptable by local flourmills. It therefore provides a large and relatively stable market for smallholder produce, and the social impact agenda and capacity requirements offer incentives to expand engagement with smallholder farmers. Silverlands aims to increase farming incomes and inject capital into the regional economy:

> *'the benefits are that farmers now have a more valuable crop and he or she makes more money. You are providing a market and you need small-scale producers for your factory as you want volume of throughput. They need you but you need them, so it is a sustainable relation. There are no gifts as that is not sustainable. Them making money—that is sustainable.'*[120]

The production of this positive social impact for smallholder farmers is, however, not straightforward. Although Silverlands' vision of ethical capitalism is based on sourcing almost 100% of its maize from smallholder farmers, this procurement is not direct. To fulfil its capacity needs Silverlands buys from *dalali*, the middlemen who go from house to house buying maize. This means that 'we don't have any control over the price that is being paid to the producer, and it is something that we are concerned about'.[121]

To rectify the challenge of extending positive social impacts to smallholder farmers, Silverlands outsources some of its outreach to other organisations that are also attempting to build their vision of more ethical capitalism in the agricultural sector. These intermediary organisations provide agricultural inputs on credit and agronomic training to smallholder farmers, as well as organising the logistics surrounding the delivery of produce to Silverlands. One of these organisations is the hybrid social impact investor Cheetah Development (number 4 on Figure 6.1).

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[119] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[120] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[121] Interview with Janet Sanders, Compliance Manager, Silverlands, Iringa, 03/12/2015.

Cheetah is an American organisation financed through a combination of donor funds and impact investments from accredited investors. It was founded in 2009 by American serial entrepreneur Ray Menard who aimed to apply his experiences with raising funds for technology start-ups to 'stop making rich people richer and start making poor people richer'.[122] Cheetah now prides itself as being the 'first venture capitalist ever registered in Tanzania'.[123] Cheetah operates a range of Tanzanian registered businesses, but the relevant one here is Pearl Foods as it provides agricultural inputs (high yielding seeds and synthetic fertilisers) on credit to smallholder farmers (numbers 5 and 6 on Figure 6.1). Cheetah then collects maize as loan repayment after the harvest and sells it to Silverlands, taking care of logistics and delivery (number 7 on Figure 6.1). If the farmers make a profit after Cheetah have taken their cut, it is returned to the farmers' bank accounts: Cheetah forms a key node through which farmers are rendered 'bankable' and 'investable', and are enrolled into financial assemblages through access to capital that would otherwise be unobtainable. Through Pearl Foods, Cheetah attempts to build more ethical socio-economic relations than the *dalali* system. The Cheetah model will be explored in more detail later in the Chapter.

The relationship between Cheetah and Silverlands, however, is also not straightforward. For Silverlands, buying in bulk through the *dalali* system is efficient and effective in comparison to dealing with organisations like Cheetah that involve more time-consuming bureaucracy for the quantity of produce provided. Janet Sanders, Silverlands Compliance Manager, explained that:

> *'we know that we need to do it for our shareholders so at least we show we are engaging smallholders, but my god the amount of time it takes us to negotiate with Cheetah and One Acre for such a small portion of our business, it is actually a bit over the top. It is much easier for us to phone a middleman and say listen we need 1000 tons of maize, can you deliver? They go out to their contacts, they buy, and they deliver it to the site. We really would like to find some way of developing the business so we can ensure that the little maize grower gets a better price, or as good a price as we can pay.'*[124]

This overview shows that although SilverStreet Capital and Silverlands, the SAGCOT, and Cheetah are united around the motivation to build more ethical capitalism in the agricultural sector in Iringa Region, the ways in which they see their respective roles and responsibilities in achieving this differ. Furthermore, there are weaknesses in the SII institutional assemblage due to unmet expectations, and challenges of translating SII into practice in the Tanzanian context, for example relating to forming

[122] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[123] http://www.cheetahdevelopment.org/what-we-do-1/
[124] Interview with Janet Sanders, Silverlands Compliance Manager, Iringa, 03/12/2015.

relationships between smallholder farmers and market buyers. As a major node that integrates smallholder farmers into financial assemblages, Cheetah forms the case study for the rest of this thesis.

6.3. Cheetah Development as a social impact investor

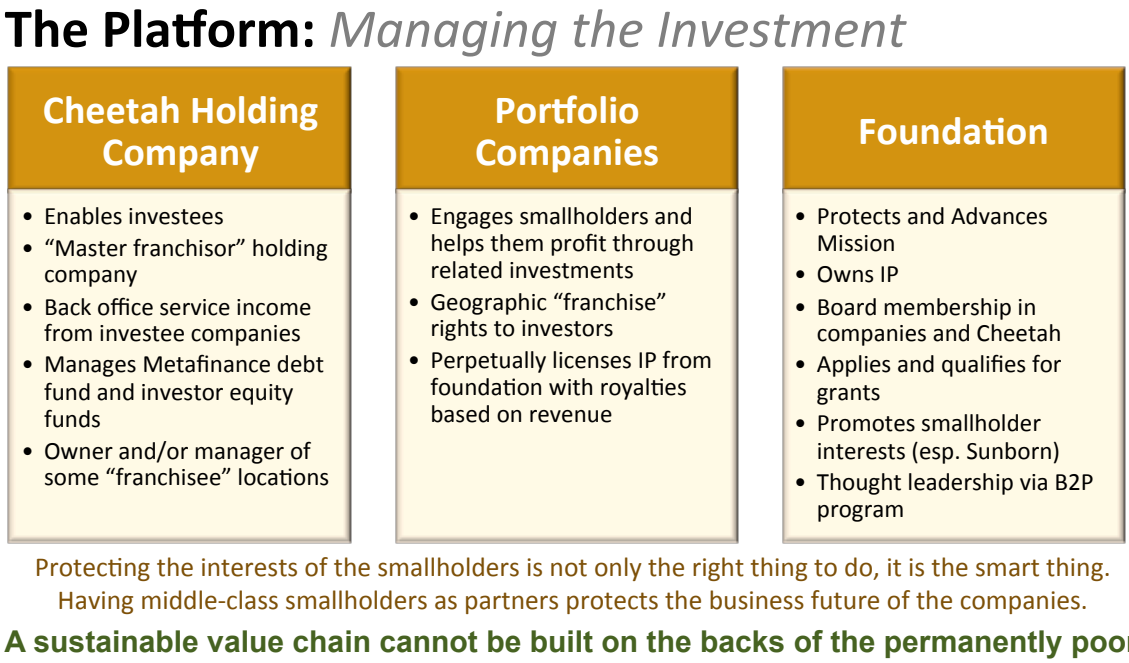

Figure 6.2 The structure of Cheetah Development.[125]

As shown in Figure 6.2, Cheetah is a sprawling organisation that comprises a foundation, a holding company, and a portfolio of franchise companies. In the words of Marco Johnson, Cheetah Vice-President Field Operations, 'it is convoluted'.[126] The Cheetah Foundation is an American registered 501(c)(3) tax-exempt non-profit that aims to protect and advance the Cheetah mission. It also owns the intellectual property for the franchise companies, applies for grants, receives donations, and produces fundraising and marketing information. The Foundation retains strong links with the Lutheran Church of Minnesota, especially through donations. The Cheetah Holding Company is in the process of separating from the Cheetah Foundation. Johnson emphasises this distinction:

> *'Yes Cheetah Development Inc. is a US-based charity for tax reasons, but we don't like to think of ourselves as an NGO. We are actually an impact investor. We are at the point now*

[125] Taken from the Cheetah Development (2016) *Extreme Impact Investing* presentation, slide 11.
[126] Interview with Marco Johnson, Cheetah Development Vice-President Field Operations and President of Pearl Foods, Iringa, 12/09/2015.

where we are attracting large enough investors and they don't have the experience or comfort of investing into an NGO. They want to invest into a company, so we need to have a fund manager and all of that. The for-profit will run the equity fund and the collateral fund needed to do the work here in Africa."[127]

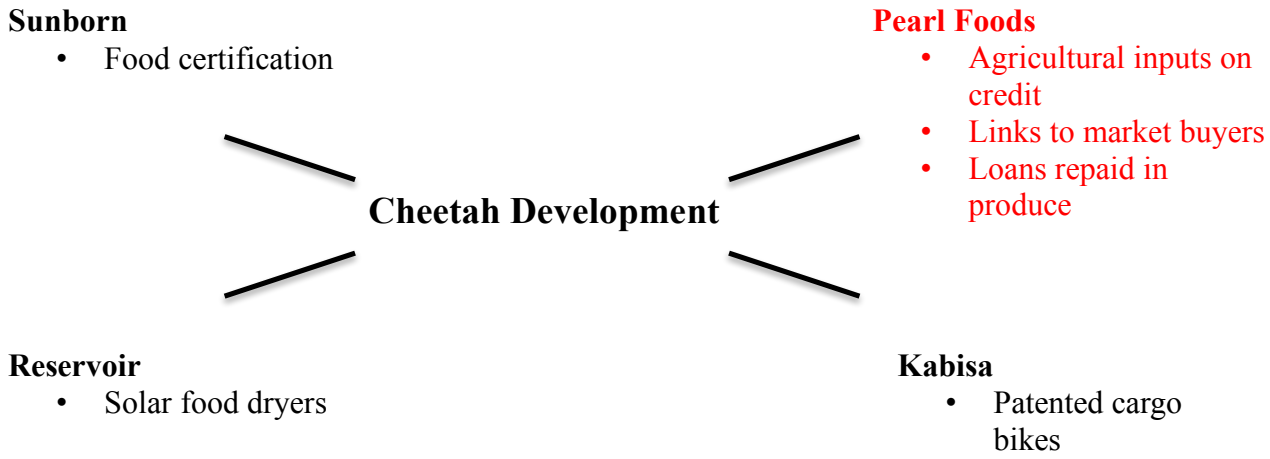

Figure 6.3 The Cheetah franchise companies.

The Cheetah Holding Company will manage investments and provide the back-office services for the diversified portfolio of for-profit Tanzanian registered companies that are shown in Figure 6.3. These are Kabisa that holds a patent for a sturdy cargo bicycle; Reservoir that provides solar food driers on credit; Sunborn food certification that labels the dried food; and Pearl Foods farmer services that provides agricultural inputs on credit and links farmers to market buyers. Only the final three are currently operational, and the last, Pearl Foods, is the focus of this thesis since it deals directly with smallholder farmer primary production. These franchises aim to fill existing gaps in agricultural value chains that have the potential to be financially lucrative while positively affecting the lives of rural people. According to the Cheetah website, filling these value chain gaps is the secret to how Cheetah has 'cracked the code on moving smallholder farmers from subsistence farming to commercial farming and from poverty to prosperity'.[128]

[127] Interview with Marco Johnson, Cheetah Development Vice-President Field Operations and President Pearl Foods, Iringa, 29/09/2015.
[128] http://www.cheetahdevelopment.org/.

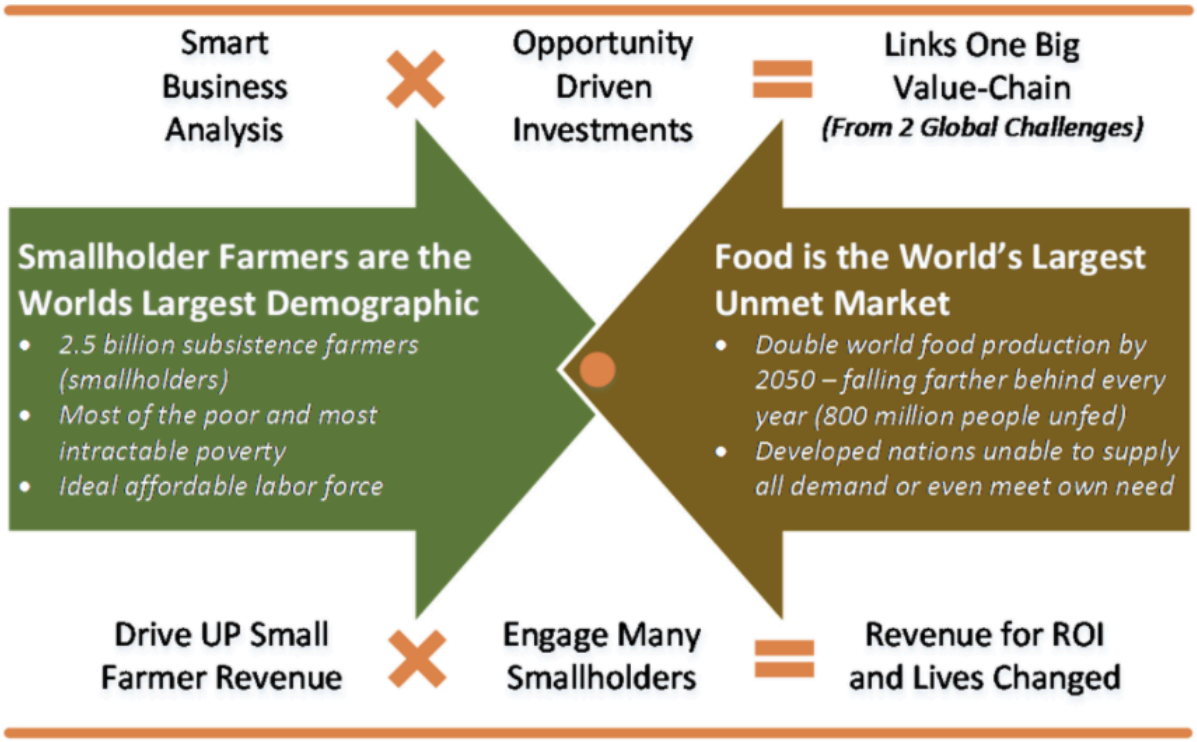

Figure 6.4 Cheetah's business model.[129]

As depicted in Figure 6.4, the Cheetah model resonates with the literature on the new green revolution for Africa. It focuses on building profitable value chains driven by the private sector through 'smart business analysis' and 'opportunity driven investments'. These value chains are intended to incorporate smallholder farmers, with the aim of improving food productivity and market access, and ultimately boosting incomes and food security (See Toenneissen et al. 2008; McMichael 2013b; Kissoly et al. 2016). Cheetah aims to improve the ability of farmers to participate in agricultural value chains as 'in a world increasingly dictated by value chains and the rules of globalization, competitiveness is the condition for survival' (World Bank 2008, p.154). According to the FAO (2005), an agricultural value chain is a set of linked actors and practices that add value at each stage from production of an agricultural product to its final consumption. Building these value chains often entails vertical and horizontal integration between suppliers, the implementation of standards and strict quality control for producers, processors, and retailers, and the consolidation of the supply base through, for example, contract farming and the formation of farmer associations. The focus on building private sector value chains is clearly expressed in the WB's *World Development Report 2008*: 'emerging new agriculture is led by private entrepreneurs in extensive value chains linking producers to consumers and including many entrepreneurial smallholders supported by their organizations' (World Bank 2008, p.8).

[129] Taken from: http://www.cheetahdevelopment.org/

Concerns have been raised about the terms of smallholder participation in agricultural value chains, and whether it represents a conduit for global value-capture by particular interests at the expense of smallholder farmers, creating risks of indebtedness, dependency, and exclusion (McMichael 2013b). These concerns are based on an appreciation of the hardship relating to multiple historical waves of incorporating smallholder farmers into international agricultural value chains, as discussed in Chapter 2 (Davis 2002; Watts 1983).

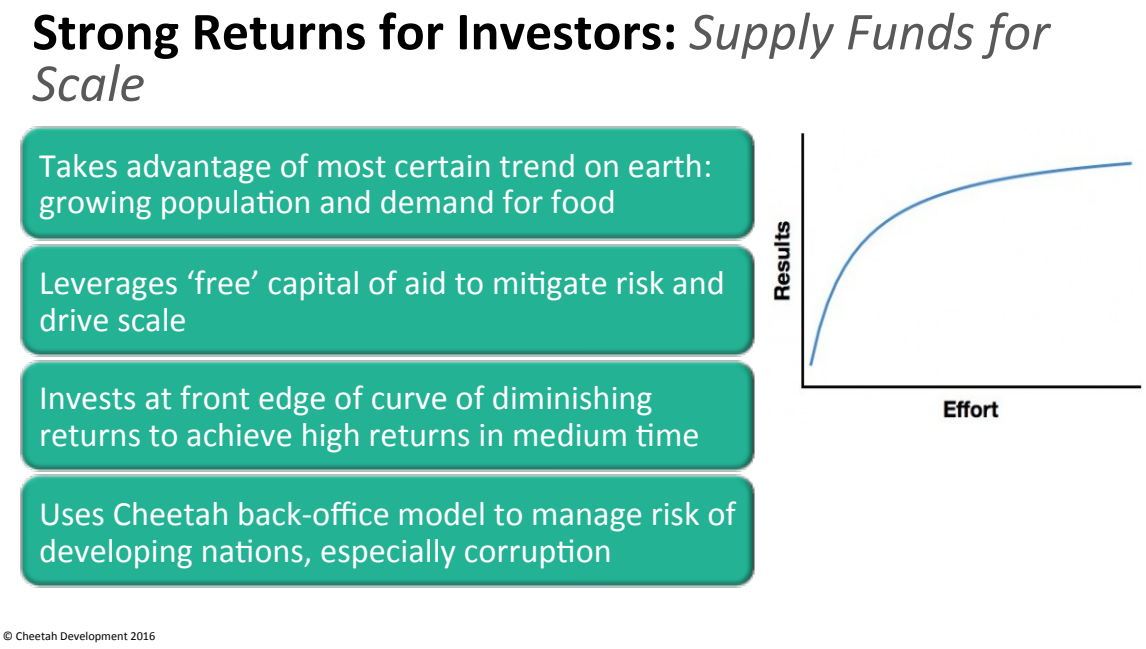

Figure 6.5 Cheetah's motivations.[130]

Cheetah is a hybrid impact investor as it borrows and assembles mechanisms and motivations from a variety of sources. It employs a layered funding structure with initial start-up capital provided by philanthropic organisations and donations to leverage the '"free" capital of aid to mitigate risk and drive scale', as explained in Figure 6.5. According to Menard, 'philanthropic risk capital makes a lot of sense to us on the front side, but you better get yourself unhooked from it as quickly as possible'.[131] After this initial phase, therefore, it is intended that growth will be funded by 'blended finance' from impact investors, commercial finance, and local investors. Appealing to impact investors and commercial finance also enables Cheetah to tap into a larger investment fund pool than traditional aid donations.[132] From 2012 to 2016, the organisation received USD 7 million in investment, and the highly ambitious pipeline for expansion is for USD 200 million to be invested over the following five

[130] Taken from: Cheetah Development (2016) *Economics of Rural Poverty and Cheetah's Model* presentation, slide 8.
[131] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[132] Cheetah Development (2016) *Micro-Venture Capital: Financing the 'missing middle'*.

years.[133] The impact investors include accredited individual investors, foundations, and family offices, and they expect a financial return of the capital they invest, and ultimately a profit on their investment, as well as the satisfaction of supporting an organisation with a social mission.

The rationale behind Cheetah's focus on SII is related to the issue of scaling up approaches to agricultural development. Menard explains that:

> *'it is actual capital from impact investors that expect not just a return of capital, but a return on capital. There are 2.5 billion smallholders in the world. If you cannot give a return of capital and a return on capital you cannot go beyond this problem of scale. There are a lot of people that say in theory if only we gave the investment money away then the businesses would succeed and sustain themselves. Well how are you going to take on a big scale problem that way? You just can't.'*[134]

According to Menard, the financial discipline to pay somebody back is central to go to scale and build sustainable value chains, and provides a key distinction between impact investing and aid:

> *'the truth is when you have free money you never figure out how to make a profit because you don't have the discipline that forces you to pay somebody back. That discipline causes you to focus on what is important: revenue. Money wins. You can't make it not win, because then an investment ends, the scale ends, the success ends, the programme ends, the jobs end. I can introduce you to a whole lot of very goodhearted people that are trying to work with smallholders and don't have any requirement to pay anybody back as they just expect donors to sustain them. They are trapped as a result as they haven't worked out how to make money for themselves or the farmers because they are living under a different kind of disciplinarian.'*[135]

As Figure 6.6 demonstrates, according to Cheetah, SII is also more sustainable than standard aid as it may avoid dependency on the organisation, and instead builds local value chains that are disciplined by market imperatives and the drive to generate revenue. Cheetah is reconfiguring aid as 'free money' against which to articulate its vision of SII as a responsibility to produce positive social and financial impacts.

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[133] Cheetah Development (2016) *Extreme Impact Investing* presentation.
[134] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[135] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.

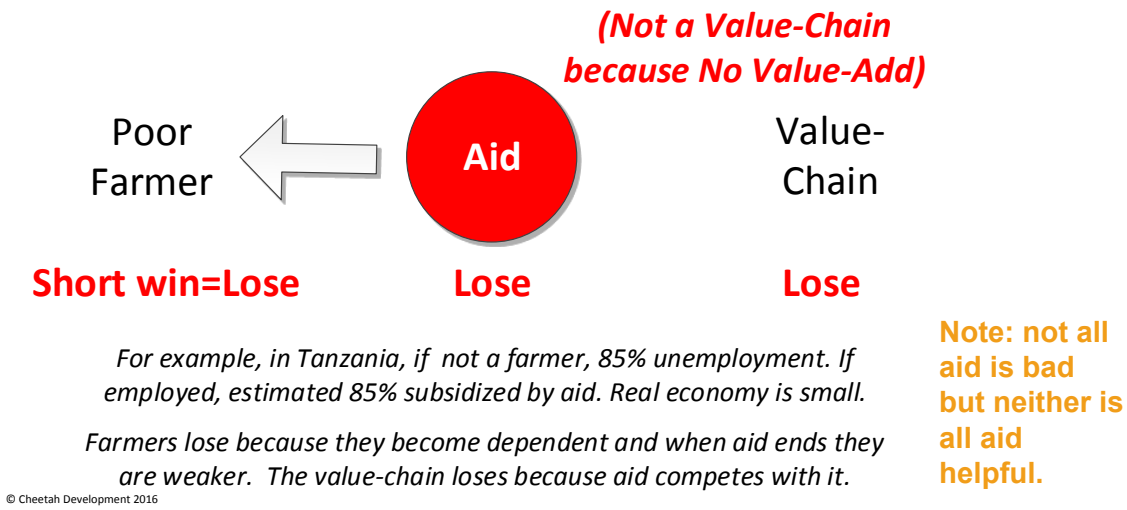

Figure 6.6 Cheetah's view on the difficulty with aid.[136]

Menard draws a further distinction between outreach and impact. He acknowledges that aid organisations are often highly skilled at reaching large numbers of farmers, and therefore make useful partners. According to Menard, however, they have limited 'impact' outcomes as they are not market-orientated. Instead, he emphasises markets as providing the solution to challenges of agricultural development:

> *'They [aid organisations] are so good at entering villages, organising people, recruiting them, taking data, doing demographic studies, providing training… a whole bunch of activities that are really expensive, complicated, and hard to do. They just don't have any lasting impact when they do those things because they are not in position to be a business and they are not in a position to manage markets.'*

According to Brad Brown, Senior Vice-President Impact Investment and Philanthropy, Cheetah turned to SII due to a:

> *'frustration with all the aid dollars that float into the development world. In many cases things haven't got better, or they may have even gotten worse. It just becomes a simple question of what is the social return on investment of all these dollars that flow into Africa or*

[136] Taken from: Cheetah Development (2016) *Economics of Rural Poverty and Cheetah's Model* presentation, slide 5.

South Asia. If you come from the investment world or the business world you know the power of capital and what equity and capital concentrated on a problem can do."[137]

These arguments of Menard and Brown mirror the literature on 'dead aid', which cites dependency, corruption, and poverty as results of a reliance on aid (e.g. Moyo 2009). Articulating their model against traditional aid enables Cheetah to reconfigure development challenges as business issues based on a 'lack of economy'. This framing carves out a key role for the private sector, as 'when you start to analyse these problems they are all business-orientated issues. No NGOs are going to solve it, no governments can solve it, you have got to have private sector investment.'[138] Consequently, Cheetah has attempted to build incentives into the model so that the scaling and success of the business relies on increasing incomes for smallholder farmers. This means that, starting with the farmer, all the actors along the value chain should make money through commercial and financial discipline. Cheetah is therefore an impact investor on two levels: it acquires capital from impact investors, and the organisation itself invests for impact in smallholder farmers.

Cheetah also expends much effort in its marketing material to define itself against other competing models of financing agricultural development, especially microfinance and venture capital. To do this Cheetah draws on the concept of the 'missing middle' of finance provision. This is situated between microfinance—offered in small amounts and over short periods—and commercial bank lending, private equity, and venture capital (VC) investment. From this perspective, 'missing middle' financing is important to enable farmers to absorb the costs of adopting new techniques and investing in new technologies (FAO 2011). Figure 6.7 depicts Cheetah's conceptualisation of this 'missing middle'.

[137] Interview with Brad Brown, Cheetah Development Senior Vice-President Impact Investing and Philanthropy, Skype, 07/10/2016.
[138] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.

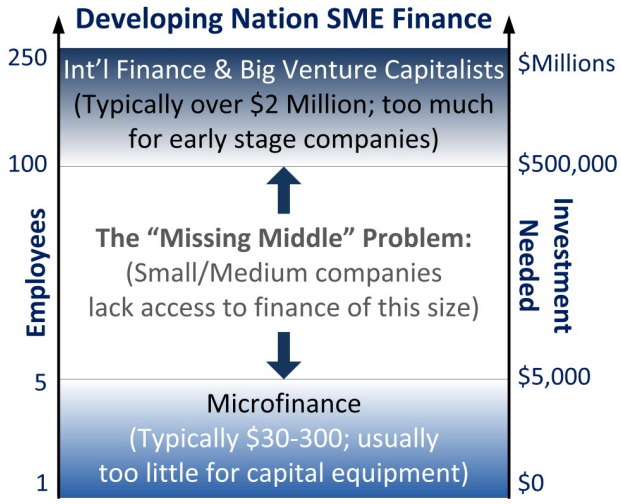

Figure 6.7 The 'Missing Middle'.[139]

Microfinance, despite successes in urban contexts, has historically failed to penetrate rural areas and cater for smallholder farmers. Transaction costs tend to be too high due to remoteness from head offices leading to small loans with high interest (Schaefer-Kehnert & Von Pischke 1982). Arguably, the typical weekly or monthly microfinance repayments are also a poor fit with rural livelihoods that rely heavily on annual or biannual crop cycles and so require longer term finance (Christen & Anderson 2013). Menard explained his perspective on the limitations of microfinance in rural areas as:

> *'the average [microfinance] loan to a small farmer in a rural area is $50 and down, depending on the part of the world you are looking at. The amount of inputs this can supply is for a garden size. If that farmer is only given a loan big enough to keep them in subsistence, they are faced with the choice of eating what they grew and not selling it and not paying the loan and just eating a little better, or continuing to be hungry. That is an impossible position to put people in.'*[140]

On the other hand, commercial bank loans are usually larger and longer term, meaning that lenders often require formal collateral and a detailed assessment of the borrower. This raises transaction costs, necessitating loan sizes that tend to be too large for the rural finance market. The 'missing middle' therefore refers to 'the lack of capital appropriate for their [smallholder farmers] risk profile and available in the amounts they need' (Doran et al. 2009, p.8). This group, which has typically been seen as 'unbankable', includes individual farmers and farmer associations that are in a position to adopt more specialised agriculture, but lack the complementary financial services and market outlets

[139] Taken from: Cheetah Development (2016) *Micro-venture capital: Financing the 'missing middle'.*
[140] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.

to manage risks and build production capabilities to go to scale. Organisations like Cheetah, however, focus specifically on providing financing for this 'missing middle' to demonstrate that it in fact represents an investment opportunity: smallholder farmers are rendered investable. Loans to this sector tend to range from USD 500 to USD 500,000, and there has been a proliferation of organisations promoting innovative models of providing this financing, often in partnership with international financial institutions and donors. These include non-profit social enterprises such as Root Capital and TechnoServe, and banks such as RaboBank and Standard Bank Africa (Milder 2008; Goldman et al. 2016).

To translate SII commitments into a practical model that is distinct from other models of financing agricultural development, Menard has developed concepts such as 'micro-social venture capital'. This refers to the practice of investing small amounts in a portfolio of socially orientated and early stage start-ups. Although Menard states that 'we feel like we have pioneered this whole space'[141], Cheetah's 'micro-social venture capital' model borrows tools from the traditional VC sector. This includes the careful vetting of investments and the granting of management oversight to the investor (Cheetah) to assist in the development of the companies. Cheetah also embraces the language of investing, and associated processes of financial disciplining through pressure to repay loans and generate financial returns on investment. The 'micro' element refers to lowering the cost of setting up businesses in the Global South through three tactics: a repeatable franchise approach where businesses share back office functions, the system of joint and several accountability and shared ownership, and a workforce based on volunteering and internships.[142]

While sounding professional and enticing on fundraising and marketing materials, terms such as 'micro-social venture capital' are confusing and distracting when attempting to put the model into practice. Brown stated 'I'm not too crazy about those terms. That is our founder, he likes those terms.'[143] This means that below Menard there is a layer of Cheetah staff members who translate these terms and complex theoretical models into practice. On the side of investment this falls to Brad Brown, Senior Vice President Impact Investing and Philanthropy, and on the operational side in Tanzania it falls to Marco Johnson, Vice President Field Operations and President of Pearl Foods. Beneath Johnson, field teams consisting of permanent Tanzanian staff and student interns further translate the model into the rural Tanzanian context and make it understandable to smallholder farmers. Their role is important as 'you can't just place a business model onto the situation and follow

[141] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[142] Cheetah Development (2016) *Micro-Venture Capital: Financing the 'missing middle'*.
[143] Interview with Brad Brown, Cheetah Development Senior Vice President Impact Investing and Philanthopy, Skype, 07/10/2016.

it to the letter'.[144] The field teams are responsible for conducting credit assessment, signing up farmers to the programme, collecting maize repayments, and mediating relationships between Cheetah and participating farmers.

6.4. Cheetah Development's diagnosis of the challenge of agricultural development in Iringa Region

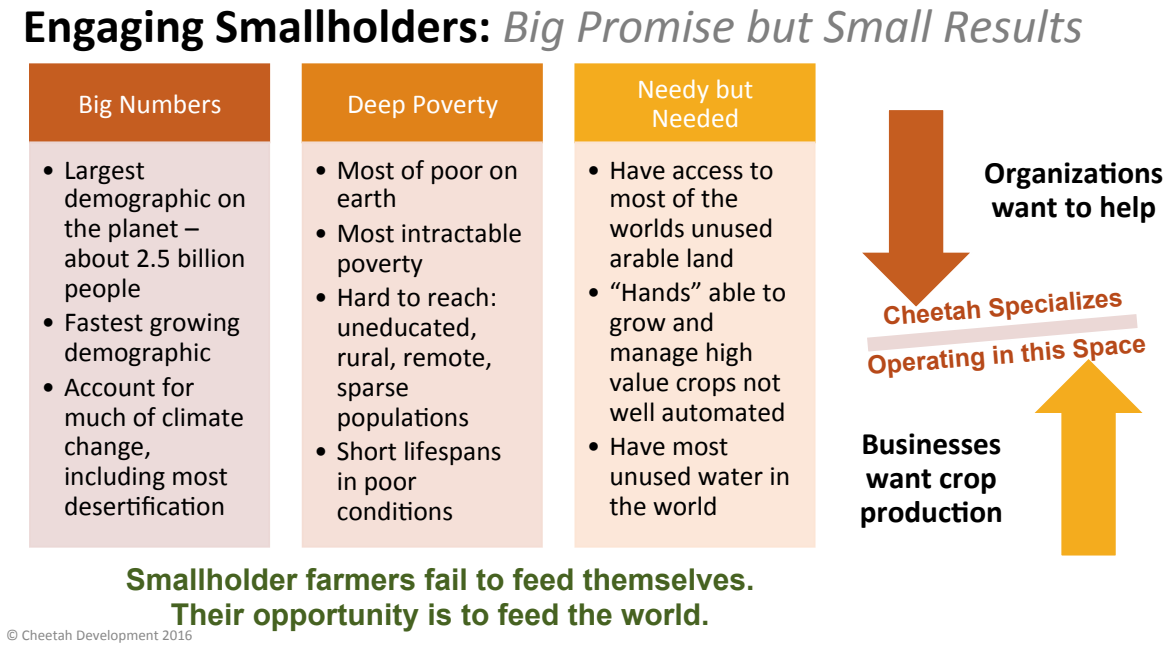

Figure 6.8 The challenge of agricultural development.[145]

There are two major sets of assumptions at the heart of Cheetah's diagnosis of the challenge of agricultural development: assumptions about smallholder farmers, and assumptions about a lack of economy. As demonstrated in Figure 6.8 and later in Figure 6.11, Cheetah treats smallholder farmers as a homogenous mass that suffers from 'deep poverty, and 'short lifespans in poor conditions', and who are limited by 'laziness' and 'driven by access to freebies and short-term thinking'. In Figure 6.8, Cheetah reiterates long standing narratives that blame smallholder farmers for climate change and desertification that have been convincingly disputed by political ecology scholars (e.g. Fairhead & Leach 1996; Leach & Mearns 1996; Mortimore 1998). This unsophisticated understanding, based on widely disputed tropes, leads to a depiction of smallholder farming as in need of 'modernisation' to act as 'investable' entrepreneurs in the value chain. Figure 6.8 also reiterates problematic narratives about land and water availability in Africa. Political ecologists have highlighted that although land

[144] Interview with Eliza Post, Cheetah Development Field Team Leader, Iringa, 27/10/2015.
[145] Taken from: Cheetah Development (2016) *Farmer Management Model* presentation, slide 2.

may seem 'unused', it is often part of complex access and use relations that may be seasonal or transitory (e.g. Li 2014a; Scales 2012). The implications of these flawed assumptions will be unpacked in more detail in relation to farmer livelihoods in Chapter 7, and the clashes between farmer livelihoods and the Cheetah model in Chapter 8.

For Cheetah, 'a lack of economy' and broken value chains are at the root of agrarian poverty and the reliance on subsistence farming in Iringa Region. Menard explains that 'at the foundation of all the things that break our heart, of the disease, and orphans, and malnutrition, at the base of those problems is a lack of economy'.[146] For Menard, this is a multi-faceted problem: farmers plant small plots and achieve low yields, and then struggle to transport the harvest to market leaving it vulnerable to spoilage from rot, rats, and insects. As depicted in Figure 6.8, Cheetah sees value chains in Iringa Region as being 'broken', as on the one hand smallholder farmers are often unable to access high quality agricultural inputs and, on the other hand, market buyers like flour mills and the National Food Reserve Agency struggle to locally procure enough produce to reach capacity. If farmers cannot sell their product at a fair price then they do not have an incentive to produce more, and if market buyers cannot obtain enough maize to meet demand from local sources then they may look abroad or to large-scale producers instead. Within this 'lack of economy', Cheetah focuses on two issues: crop wastage and the role of middlemen.

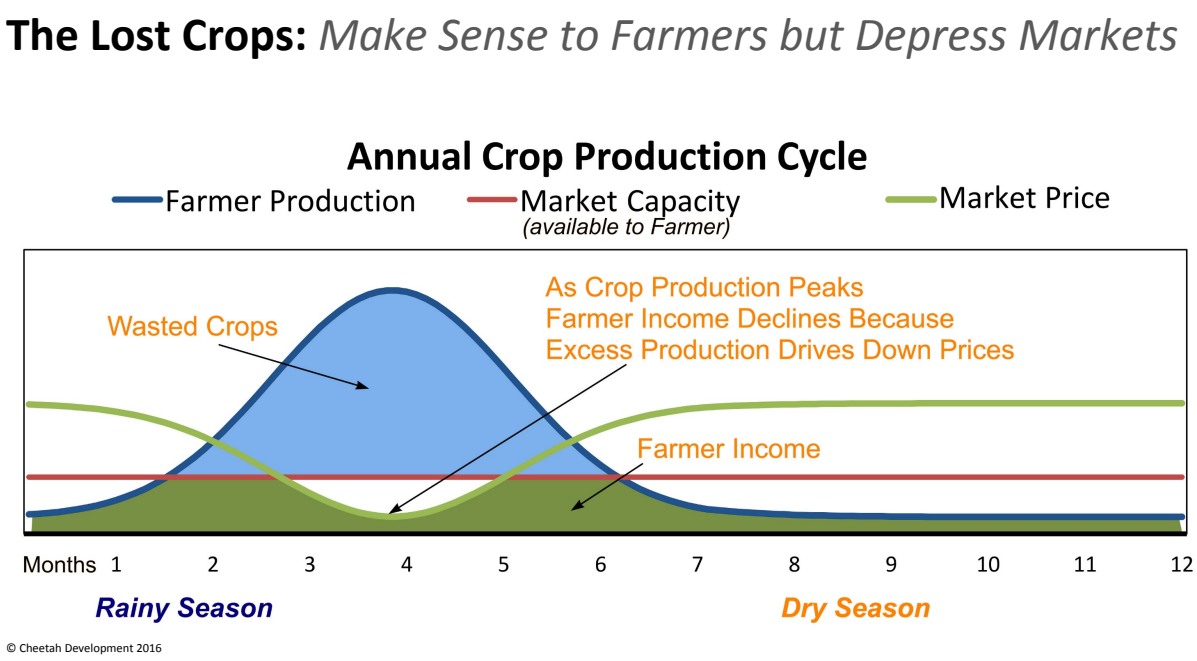

Figure 6.9 Cheetah's understanding of crop wastage.[147]

[146] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[147] Taken from: Cheetah Development (2016) *Economics of Rural Poverty and Cheetah's Model* presentation, slide 4.

Figure 6.9 depicts farmer production rationale, according to Cheetah. At the beginning and end of the harvest period the prices for crops are high as demand is near or below market capacity. During the peak harvest period, however, the market price drops significantly as production far exceeds the market capacity that is available to the farmer. Cheetah's model suggests that a lot of the crop is wasted as supply outstrips demand, and 'when it gets above that production capacity it just rots, and the truth is a very large amount of it rots. At the peak of it the prices collapse and their [smallholder farmers] income is actually negative.'[148] According to Cheetah, for the farmers these losses are outweighed by the potential for gaining a higher price if they can sell some of the crop at the beginning or end of the harvest period.

In this way, the Cheetah model values maize solely as a cash crop—a commodity grown for the purpose of exchange—and any crops not being sold are therefore being wasted. In response to this perceived problem, Cheetah attempts to raise the red line of market capacity through smoothing supply and demand in the value chain in two ways: by drying food using solar driers to sell when the price is high through portfolio company Reservoir, and by aggregating produce and connecting smallholder farmers to new market buyers through Pearl Foods.

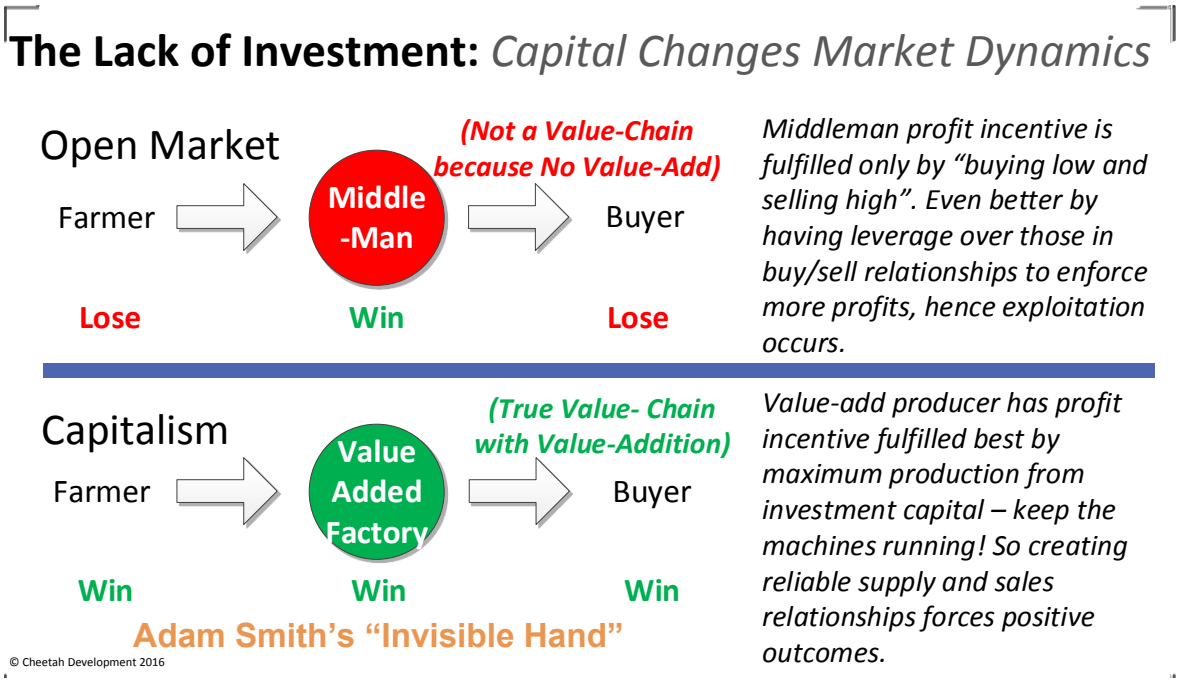

Figure 6.10 Cheetah's depiction of 'open market' versus 'capitalism'.[149]

[148] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[149] Taken from Cheetah Development (2016) *Economics of Rural Poverty and Cheetah's Model* presentation, slide 6.

As shown in Figure 6.10, in the Cheetah model the middlemen that tend to connect smallholder farmers with market buyers are framed as a major challenge. The *dalali* are independent traders who go from door to door buying produce from farmers individually, and then sell it on in bulk to market buyers. The number of *dalali* increased dramatically in the late 1980s and 1990s in the wake of structural adjustment policies that legalised private commercial activities and prompted shifts away from parastatal marketing (See Bryceson 2002, 1993). Many *dalali* were former smugglers or returning Asian traders who had ceased trading or left the country after their businesses were nationalised in the early 1970s (See Ogawa 2006).

The *dalali* perform a valuable service by connecting farmers to market buyers, but these connections are fragmented, and a lack of communication over prices means that farmers are often short-changed. According to Cheetah, these middlemen are driven by the profit incentive leading them to practice 'buying low and selling high', and the leverage caused by a lack of alternatives for smallholder farmers leads to exploitation (see Figure 6.10). Although some *dalali* build personal relationships of trust and reciprocity between buyers and sellers, they have been known to manipulate prices. A common practice is to fill plastic *debe* (20 litre containers) with sand and boiling water to stretch them so that the *dalali* receive more produce for the price of a *debe*. Johnson reported that the record he had seen was 147kg in a 100kg container, but still for the set price of the 100kg container.[150] A large-scale farmer in Iringa Region expressed his dissatisfaction with the *dalali* system as 'it is the middleman who is really taking the piss for many years. Export trading, I would call them exploit trading. The little guy [smallholder farmer] is submissive. He has been beaten for so long that he just accepts it.'[151] The manager of a flourmill was equally disparaging of the *dalali* system:

> *'The middleman makes a lot of money from it. If the farmer sold tomatoes directly to me I used to purchase it for 85 shillings a kilo. The middleman used to charge me 150 shillings per kilo. That difference goes into his pocket. Of course, he does the transportation and all that stuff. When you are considering tons and tons of it, the middleman is making money. There is under-the-table bribery, corruption, all that is there.'*[152]

In Tanzania, perceptions of *dalali* have historically been couched in a racialised discourse, with prejudice directed particularly towards South Asians involved in trade and transport. By 1921, there were around 10,000 South Asians in what is now Tanzania, many of whom had migrated to the East Africa Coast along the Indian Ocean trading routes, and then moved inland to take advantage of new

[150] Interview with Marco Johnson, Cheetah Development Vice-President Field Operations and President Pearl Foods, Iringa, 12/09/2015.
[151] Interview with Otto Ulyate, Rutuba Farm, Iringa, 01/12/2015.
[152] Interview with Dr Anand Moro, Sembe Tofauti, Iringa, 05/11/2015.

opportunities in trading ivory, cloth, weapons, and agricultural produce (see Nagar 1996). Others were brought to East Africa by the Germans and the British to work on the railways and fill skilled positions in the civil service. By the 1930s, there was growing resentment against the successes of South Asian traders. The British colonial government passed laws creating agricultural marketing cooperatives to be the sole purchaser of produce, with the aim of out-competing South Asian traders who were depicted as 'blood sucking' mediators of commerce (Coulson 2013).

Erosion of the South Asian 'commercial bourgeoisie' became a major aim of the post-independence government. This was partly due to the perceived association between race and economic class, although this ignores the voices of South Asian women and poor. South Asian middlemen were associated in popular perceptions with paying low prices and under-weighing agricultural produce and were often classed as *wanyonyaji* (exploiters) (Nagar 1996). The Arusha Declaration of 1967 led to the nationalisation of private businesses and the large-scale revoking of licenses of South Asian traders. By 1983, 2874 South Asian businessmen had been arrested as 'economic saboteurs' (Nagar 1996). Liberalisation policies from 1984, however, disproportionately benefitted the South Asian traders who possessed capital reserves and business experience to benefit from new trading licenses. Previously unofficial trade was legalised, and South Asian traders began to restart their businesses and return from overseas. Many moved into transportation and distribution to become what has been called the 'container bourgeoisie' (Nagar 1996).

The racialised discourse surrounding middlemen continues today, and is reflected in the Cheetah model. Menard was particularly disparaging of Indian middlemen:

> *'I am going to say something culturally bleak. The Indian culture is very adverse to farmers because their business approach is to buy as cheap as they can, and they will do almost anything they can to make that happen. They hire secret agents in villages that spread false pricing information however they want to manipulate the market. They tell that they have a high price when they are trying to get rid of a competitive buyer. They will say the actual market prices are low when they are trying to buy for less. They will break up farmer cooperative groups by refusing to buy from them until they are so desperate that they start side-selling to individuals.'*[153]

In response to this perceived challenge of exploitative middlemen, Cheetah aims to build 'capitalist' value chains rather than an 'open market' (see Figure 6.10). The distinction between these, however, is unclear, and appears to be based on ethical factors. For Cheetah, the 'capitalist' system is based

[153] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.

around connecting smallholder farmers directly to value-adding factories to produce 'reliable supply chains and sales relationships'. Despite identifying a variety of problems stemming from a 'lack of economy' and 'broken value chains', for example corruption, unfair prices, and middlemen 'buying as cheap as they can', Cheetah's solution to these problems appears to be to propose deeper market penetration through the Pearl Foods programme. This market penetration, however, is to occur through social relations that are perceived by Cheetah to be more ethical, equitable and transparent. Issues surrounding how Cheetah constructs its vision of more ethical capitalist relations will be discussed further in Section 6.6.

6.5. Cheetah Development's solution: Pearl Foods

Figure 6.11 Cheetah's depiction of the opportunity of investing in African agriculture.[154]

Responses to calls to boost productivity and commercialise agriculture in Africa tend to adopt one of two approaches: the displacement of smallholder farmers to create large commercial farms and a pool of wage labour, or the incorporation of smallholders into value chains as entrepreneurial producers (see Chapters 1 and 2). Cheetah places smallholder farmers, and their 'land and hands', at the centre of their vision of a productive, equitable, and sustainable agricultural future for Africa, as well as the generation of 'serious revenue' (see Figure 6.11). Smallholder farmers are presented as 'needy but needed' as they are the largest, and largest growing, demographic on the planet with access to much of the world's arable land, but are also often experiencing intractable poverty (see Figures 6.8 and 6.11).

[154] Taken from Cheetah Development (2016) *Extreme Impact Investing* presentation, slide 2.

Cheetah, therefore, aims to work with smallholder farmers as investable partners, rather than seeing them as recipients or beneficiaries:

> *'If you're an average farmer in Africa you have say a hectare and if you are an average big farmer in America you have say 5000, and so literally 5000 hectares competes against 5000 families. Why not instead put all that money in investments towards making those 5000 families succeed?'*[155]

The answer to the above question posed by Menard is that it depends on what the intended goal is. For Cheetah, working with smallholder farmers as partners makes sense in two ways. Firstly, it provides an opportunity to make a substantial social impact through increasing household incomes and alleviating rural poverty, while simultaneously working to solve the problem of feeding the increasing global population. Secondly, smallholder farmers represent a large market and thus an opportunity for Cheetah to take their model to scale and generate a financial return. Cheetah expects agriculture to be a profitable investment sector for the next 20 years, and within that smallholder farmers are a huge market opportunity. This means that for Cheetah, 'protecting the interests of smallholders is not only the right thing to do, it is the smart thing. Having middle-class smallholders as partners protects the business future of the companies.'[156] Cheetah, therefore, frames smallholder farming as an investment opportunity driven by the self-interested pursuit of profit as well as a moral imperative. Cheetah's underlying ambition is that by, introducing a profit-maximising logic and the financial discipline of having to repay a loan through 'managing' smallholder farmers, 'the asset we are building is an army of producers with land and hands—and serious revenue.'[157] Cheetah aims to work with smallholder farmers as partners and entrepreneurs, but based on 'managing' and 'disciplining' them to fit a very particular vision of what that entrepreneurship entails.

[155] Interview with Ray Menard, Cheetah Development CEO and founder, Skype, 17/05/2016.
[156] Cheetah Development (2016) *Extreme Impact Investing* presentation.
[157] Cheetah Development (2016) *Extreme Impact Investing* presentation.

Figure 6.12 Cheetah's vision of the solution to agricultural development.[158]

[158] Taken from the Cheetah Development (2016) *Extreme Impact Investing* presentation, slide 6.

The key way that Cheetah attempts to partner with smallholder farmers to bring about agricultural development is through the Pearl Foods model. As demonstrated in Figure 6.12, at a conceptual level Pearl Foods is a 'multi-sided platform' that is dissected into four steps. They start with farmers who are earning under USD 50 per year, including only the cash that actually touches their hands and not the value of the food they grow to eat.[159] Exactly how they ascertain this USD 50 per year benchmark or why it is set at this level is, however, unclear. At the first step Cheetah aims to help farmers to grow their major crop more effectively. In Lower Kilolo this is maize. The objective is to triple farmer incomes in the first year. Further steps aim to enable farmers to expand production and adopt mechanised equipment and 'higher value crops'.

To increase farmer incomes, Cheetah provides agricultural inputs on credit. Providing credit to smallholder farmers to support agricultural development through the adoption of new technologies and practices has long been promoted. A World Bank (1975b, p.105) report stated that providing agricultural credit is 'particularly central for small farmers if they are to produce a marketable surplus to contribute to the development process'. The model of lending in-kind rather than in cash taps into a development narrative dating back to the 1970s, which posits that smallholder farmers lack the business mentality and experience to deal with loans in cash (Schaefer-Kehnert & Von Pischke 1982; Von Pischke & Adams 1980; Shipton 2010). It is also argued that in the absence of comprehensive surveillance of how the credit is used, loans given in the form of inputs are more likely to be used for their intended purpose, meaning that the borrowers are more likely to be able to repay (Goldman et al. 2016). The inputs themselves are therefore enrolled as tools for disciplining farmers, in the absence of constant and direct surveillance of borrowers by the loan provider.

Giving loans in-kind is also based on the argument that agricultural credit alone is insufficient to boost agricultural productivity and incomes in contexts where access to quality inputs—or knowledge of how to use them—is limited. In other words, it is not just the affordability of agricultural inputs that is the problem, but also access to them. The WB has been a major proponent of this model as 'while the approach may seem excessively paternalistic, it is unrealistic to expect farmers who are not accustomed to having a cash surplus or to using purchased inputs to adjust automatically to making the necessary transactions' (World Bank 1975, p.62). The moralistic emphasis on farmers lacking a 'business mindset' is reiterated multiple times in the Cheetah literature as 'understanding mind-sets is a more important issue than to appreciate culture. Mindsets are more permanent and are difficult to change. Mindsets are the way we trap ourselves in brokenness'.[160] For Cheetah, farmer mindsets are at the root of persistent poverty and low agricultural productivity, rather than structural factors. Figure

[159] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[160] Cheetah Development (2016) *Poverty is in the Mind* presentation, slide 2.

6.13, taken from a presentation evocatively entitled 'Poverty is in the Mind', depicts some of the mindset shifts that Cheetah intends to kick-start in smallholder farming.

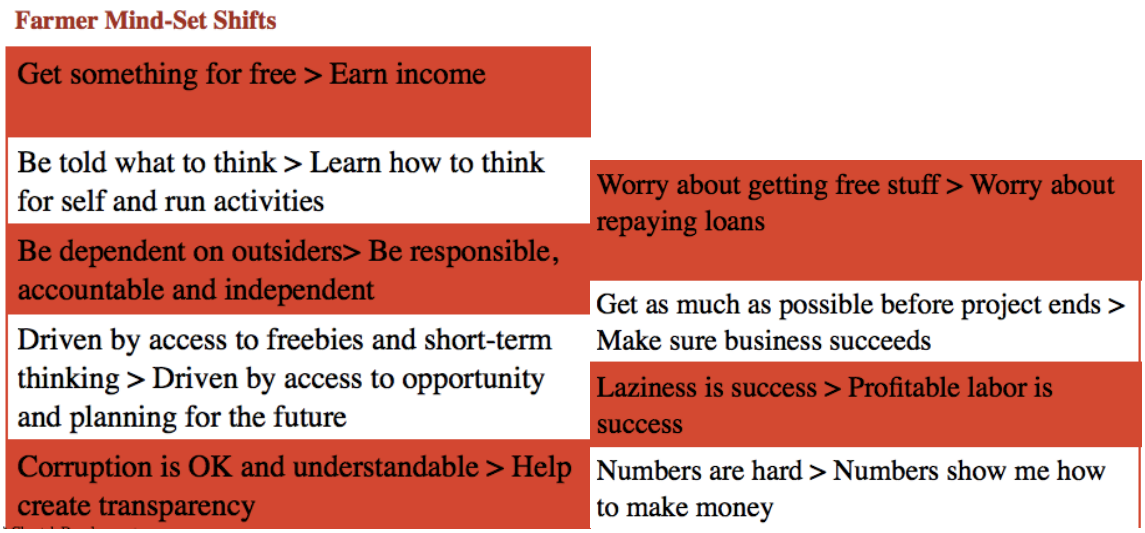

Figure 6.13 Farmer mindset shifts targeted by Cheetah.[161]

Cheetah focuses on expanding the means of production of smallholder farming by providing high quality inputs of hybrid seed and synthetic fertiliser that farmers would otherwise be unable to afford or access. They partner with local agro-dealers to boost agricultural value chains, rather than competing with them by sourcing the inputs directly from manufacturers. Cheetah does not give the loan capital through which the inputs are bought themselves, but arranges for a commercial bank to provide it by putting up the necessary collateral. Through this collateral, Cheetah is in effect acting as a guarantor for the farmers to make them 'bankable' and 'investable'. Farmers are organised into small teams that are registered, for a small fee, with the government as cooperatives or limited companies. This formal registration, combined with the use of contracts and record keeping, is intended to build farmer credit history to increase their likelihood of acquiring commercial bank loans in the future. As opposed to 'microfinance', Menard calls this 'metafinance': the system of partnering with local commercial institutions to provide larger cross-collateralised debt financing in the range of USD 500 to USD 3000.[162] Cheetah also provides agronomic training to farmers to ensure that they reach the productivity potential of the inputs that they are provided with.

At the other end of the value chain, Cheetah builds partnerships with market buyers for the aggregated produce to turn crops into cash. Once the maize has been sold, any profit after Cheetah has taken their 15% cut is then delivered to the farmers' bank accounts. Cheetah estimates that through the provision

[161] Taken from Cheetah Development (2016) *Poverty is in the Mind* presentation, slide 8 and Slide 9.
[162] Cheetah Development (2016) *Extreme Impact Investing* presentation.

of high quality inputs and agronomic training, harvests should increase eight-fold, enabling farmers to feed themselves, repay the loan in produce to Cheetah, and make a profit from the surplus.[163] For maize, Silverlands was the sole buyer in 2015. As discussed in Section 6.1, Silverlands Tanzania Limited is a large-scale commercial agricultural operation that receives investment from the London-based private equity SII fund SilverStreet Capital.[164] This means that for farmers participating in the Cheetah programme, at each end of the value chain there are financial actors playing major roles.

Cheetah makes money from the Pearl Foods franchise by taking a cut at two stages of the process: profit on the inputs and profit on the sale of produce. A range of costs including life insurance, training sessions, tax, and truck hire are charged to the participating farmers. Menard explains that:

> *'the way that it makes money is it takes a 10% gross profit on the inputs—the seeds and fertiliser—and it takes a 15% gross profit on the crop sale. It might be like an 18% total number. It does not include any hard costs like logistics, for example if we have to hire a truck or if we have to pay taxes. Those are added to the farmers' side of the ledger.'*[165]

Menard stresses that as well as the competitive financial return that Cheetah expects to make from the Pearl Foods model, it also generates a range of benefits for farmers:

> *'Now for the farmer everything just improved. They get their inputs for a much-reduced price because we are buying in bulk. They get high quality inputs from reliable sources. They get the training from us so that the seeds and fertiliser actually have value for their crop. And then we get them usually about a 30 or 40% price above what they could have gotten from the village middleman because we go straight to Silverlands. Oh, by the way they actually get paid.'*[166]

This is, therefore, an example of a model that intends to generate directly correlated social and financial impacts. For both Cheetah and their investors to gain a return on investment, participating farmers need to substantially increase their agricultural productivity (and therefore their income), and the model has to go to scale. Figure 6.14 details Cheetah's theory of change about how 'business changes lives' through 'buying from the poor—true economic development… Once smallholders have access to cash human development naturally occurs'. Cheetah defines the 'social impacts' of the Pearl Foods initiative as enhancing the affordability, quality, and accessibility of high quality

[163] www.cheetahdevelopment.org
[164] Interview with Gary Vaughan-Smith, SilverStreet Capital Chief Investment Officer, London, 13/05/2016.
[165] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[166] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.

agricultural inputs, building value chains by linking investable smallholder farmers to market buyers, and increasing the agricultural productivity of those farmers. The intended results are increased food security, increased incomes, and enhanced human development. However, socio-economic differentiation and environmental destruction resulting from the introduction of technology packages and finance through the first green revolution suggest that it cannot be taken for granted that the provision of inputs and market linkages 'naturally' leads to higher yields, higher incomes, and poverty alleviation. Chapters 7 and 8 continue to explore how the assumptions embedded in the Cheetah model misrepresent farmer livelihoods in a variety of ways, leading to clashes and the disassembling of relationships.

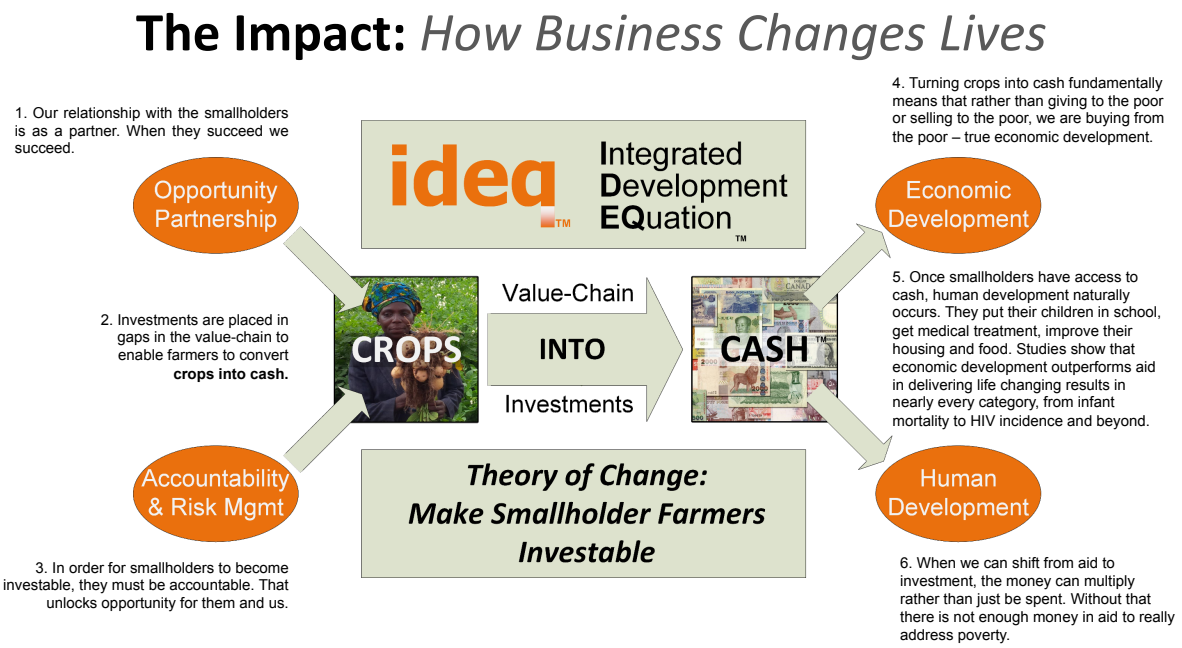

Figure 6.14 How Cheetah envisions economic and human development through business solutions.[167]

6.5.1. Loan repayment

A key element of the Cheetah model is its novel repayment strategy. From September each year, Cheetah field staff go from door-to-door of participating farmers collecting bags of crops in a similar method to the *dalali*.[168] Unlike many *dalali*, however, the bags are weighed on electric balances to check the quantity before they are transported first to storage to aggregate produce, and then to the market buyer. Farmers are issued with paper receipts to track repayment transactions.

[167] Taken from: Cheetah Development (2016) *Economics of Rural Poverty and Cheetah's Model* presentation, slide 9.

[168] Participant observation with Cheetah Development field staff, Iringa, 23/20/2015, 27/10/2015, 31/10/2015.

To enforce loan repayment, Cheetah has developed a two-tiered cross-collateralisation method of joint and several accountability. Farmers are individually contracted into small 'teams', and these teams are jointly contracted with each other in the village, with Cheetah, and with the bank. This means that individual farmers must pay back their loan, and all the loans in the team and the village must be paid back in full before any farmers are eligible to receive their profit (if they have made one). Only farmers who pay back their loan in its entirety in maize by the deadline are allowed to receive a new loan the following season. If farmers are unable to repay in maize they must repay in money, but will not be considered for another loan. According to Menard, 'it is what has allowed us to have a higher loan repayment rate than anyone else ahead of us in this space'.[169]

Despite Menard's attempt to articulate the Cheetah model against microfinance as discussed earlier, this form of cross-collateralised accountability is in fact very similar to that used in the model pioneered by the Grameen Bank in Bangladesh, and subsequently incorporated into multiple microfinance programmes. It is founded on 'group-based lending where the individual's continued access to credit is linked to the group's repayment behaviour' (Khandker et al. 1995, p.x). Brown recognises the links between Cheetah's model and that used in microfinance: 'we also borrow from the microfinance model in that we have our farmer teams self-select and they are mutually and severally responsible for the loan'.[170] Menard, however, is quick to disassociate Cheetah's form of accountability with that of microfinance by arguing that 'this idea is not invented in micro-lending—it was applied quite interestingly in micro-lending—but it was invented in business.'[171]

As the model relies on farmers fully paying back their loans in produce so the resulting revenue can be put towards collateral and purchasing inputs for the following year, Cheetah rigorously enforces loan repayment. Loan enforcement also forms the bedrock of Cheetah's vision of the future of agriculture as investable smallholders integrated into reliable capitalist value chains. Menard, however, recognises that 'it is something that is confusing to farmers who want to be treated individually, but then cannot succeed individually'.[172] As demonstrated in the quote below, Cheetah attempts to build these reliable value chains by holding smallholder farmers to account as responsible for their own development, rather than accountability lying with Cheetah:

> *'This whole issue of making people accountable is so hard, but without it an economy doesn't exist because capital can't flow. Right now in smallholder agriculture in Africa there can't be*

[169] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[170] Interview with Brad Brown, Cheetah Development Senior Vice-President Impact Investments and Philanthropy, Skype 07/10/2016.
[171] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[172] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.

a value chain built around them successfully because they are not reliable. If there is a controversial part of what we do it is because we enforce loans. We don't take people's land away from them, but we would take their goat and we would take the roof off their house. The day that we let them off the hook is the day we can never give them another loan. We are done, and they are trapped in poverty forever.'[173]

The method of loan repayment in produce is also based on the cyclical nature of farmer incomes due to the temporalities of agricultural production. The unimodal rainfall pattern and lack of irrigation in many areas means that smallholder farmers in Lower Kilolo can usually only produce one maize crop each year. This means that livelihoods tend to revolve around a major injection of capital after the harvest, along with sporadic income throughout the rest of the year (see discussion of livelihoods in Chapter 7). Cheetah intends for their model of repayment in produce after the harvest to be more appropriate for farming livelihoods than traditional micro-finance and bank finance that demand regular, often weekly, repayments. The microfinance bank PRIDE Tanzania, for instance, recently had to close down its Rural Finance Window aimed at farmers due to the high rates of default on the regular cash repayments.[174] The Cheetah model, therefore, does recognise potential incompatibilities between the temporalities of microfinance models and agricultural livelihoods, and attempts to align them. How successfully this has been achieved in practice will be discussed further in Chapter 8.

6.5.2. Credit Assessment

To join the Cheetah Pearl Foods programme, farmers need to provide the joining fee of two bags of at least 100kg of maize each (raised to 5 bags in the 2016-2017 season). Farmers must also demonstrate their 'creditworthiness', to enable risk mitigation decisions to be made about who is investable and should receive a loan. In traditional financial markets, the creditworthiness of potential borrowers is typically assessed through analysing the five 'Cs' of character, capacity (cash flow), collateral, credit rating, and capital (Knopf & Schoney 1992). For Cheetah, some of these indices are usually unavailable, for instance credit rating and collateral as traditionally defined in terms of titled property. Instead, Cheetah has assembled a tenuous and fragile method of assessing credit risk through borrowing some concepts and practices from other financial markets and traditional microfinance, and adapting them to conform to the rural Tanzanian context.

The 'fact' of the creditworthiness of a farmer is simplified, performed, and formalised through a credit assessment process that is borrowed from more traditional financial markets, for example

[173] Interview with Ray Menard, Cheetah Development CEO and Founder, Skype, 17/05/2016.
[174] Interview with the Regional Manager of PRIDE Tanzania, Iringa, 05/10/2015. Interview with village chairman, Kitelewasi, 28/09/2015.

pensions and mortgages. The credit assessment takes the form of a six-page questionnaire that is conducted by the Tanzanian Cheetah staff when they visit the villages between harvest and planting to recruit and sign up new farmers. A Cheetah staff member sits with a farmer and asks them a range of questions that include what possessions they would be able to put up as collateral, whether they are a trustworthy person, whether they have experience of using chemical fertiliser and hybrid seeds, and how much they usually harvest and sell.[175] This credit assessment process plays a role in identifying the 'commercially viable' poor to determine who is capable of participating in the Cheetah programme to provide maximum social and financial impact (see Scott 1998; Li 2007b). The answers to the credit assessment process are plugged into an algorithm based on eight indices that enables Cheetah to assess and compare both the credit risk of villages and of individual farmers within villages. The actual process by which this occurs, however, is designated a 'trade secret' over which Cheetah has a proprietary right. The details of the algorithm are withheld from the farmers, otherwise they will 'game the system', and also from other actors (including researchers) to protect Cheetah's 'competitive advantage'.[176]

The result of this secrecy is that the exact role played by credit assessment in the Cheetah recruitment process remains unclear, as does its relationship to other factors such as ability to pay the joining fee and subjective appraisals by Tanzanian Cheetah field staff, for example in the case of clear mitigating circumstances preventing the paying of the joining fee or loan repayment. A potentially more crucial means of assessing credit risk is that of peer selection. Farmers must form a group to get a loan from Cheetah, and within these groups there is internal selection whereby farmers have the final say on new members. This enables farmers to veto the membership of people who they do not feel would repay the loan. A farmer in Vitono expressed the importance of farmer self-selection: 'I think it is good because individually we know each other, who to trust and who not to… otherwise the wrong people can be given the loan and end up using the loan badly'.[177]

As well as delineating which farmers can participate in the Cheetah programme, the credit assessment process plays other practical and symbolic roles in acting as a bridge to talk about farmers and finance in the same language. Evidence for this is that the credit assessment forms were only introduced once the community bank had been enrolled as a lending partner. The credit assessment questionnaire is written in English, so the Tanzanian Cheetah staff member translates it into Kiswahili when asking the questions, and then translates it back into English when writing the answers on the paper for the

[175] Participant observation with Cheetah Development field staff, Itungi, 31/10/2015.
[176] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016. Interview with Brad Brown, Cheetah Senior Vice-President Impact Investing and Philanthropy, Skype, 07/10/2016.
[177] Interview with farmer 86, Vitono, 25/07/2016.

benefit of the solely English-speaking American office staff.[178] This process of writing the answers down on paper and translating them from the primary language of the farmer (Kiswahili) into the primary language of finance (English) also renders technical the subjective judgment of both the Cheetah staff member in categorising farmers, and the subjective judgement of the farmers of their collateral assets, trustworthiness, and production capacity. This abstraction and depoliticisation is taken a step further when the answers to the credit assessment forms are plugged into the algorithm to collapse complex farmer realities into a 'yes' or 'no' judgement over their 'creditworthiness'. The resulting 'facts' can then be reiterated to lend both Cheetah and the farmers credibility as borrowers in negotiations with the bank.

At the bank, the credit assessment process works to construct and normalise farmers as clients, as it is a familiar tool borrowed from more traditional financial transactions, for example when obtaining a credit card or mortgage. For Cheetah, being able to represent farmers as 'creditworthy' on the basis of paper evidence enables them to reassure investors, especially in the face of the perceived riskiness of investing in smallholder agriculture. For farmers, being rendered as formally 'creditworthy' opens up a range of financial opportunities; it is a node that draws smallholder farmers into new financial assemblages without the need for face-to-face interaction in a region where physical access to the urban-based banks from many villages is a challenge. In meeting rooms at the Mufindi Community Bank (MuCoBa), for example, credit assessment forms, combined with the collateral put up by Cheetah, enable farmers to be presented as credible borrowers. The chairman in Vitono village had tried to access a loan from MuCoBa by himself, but had been refused as his livelihood was predominantly farming. After completing the credit assessment process and being accepted onto the Cheetah programme, however, he found himself with a bank account at MuCoBa. He raised concerns about 'the bank coming and taking my possessions' as his livelihood and assets had not changed, and so he was no more able to meet the conditions on the loan than before he was deemed 'creditworthy' by Cheetah.[179] Credit assessment forms are also involved in affective management, as they act as both evidence of collateral and the moral authority to enforce its repossession if farmers dissent by failing to repay by the deadline and the 'facticity' of their creditworthiness is questioned. For these reasons, the Cheetah credit assessment process has considerable power in rendering farmers 'creditworthy' and 'bankable', even though nothing has changed in their material realities.

[178] Participant observation with Cheetah Development field staff, Itungi, 31/10/2015.
[179] Interview with village chairman, Vitono, 07/10/2016.

6.6. Reading between the lines of the Cheetah model

Although on paper Cheetah appears to be a sophisticated and clearly organised operation, in practice the situation is more complicated. Geographically, Cheetah is disjointed. The strategy, investment, and fundraising sides of the operation are based in the US, while the field operation occurs in Tanzania. This is not uncommon, but it does build a degree of distancing—in terms of understanding and knowledge transfer as well as geographical—into the model, as it is being refined and marketed to investors and donors by people who do not have a deep and practical understanding of how it unfolds on a day-to-day basis. As mentioned earlier, the complex ideas and models of SII created by Menard, for example 'micro-social venture capital' and 'metafinance', have to be mediated, translated, and adapted before they can be put into practice. This disjuncture between the model, and how it actually works in practice, means that some of the marketing material on the website and company presentations is misleading. According to Johnson, 'we [Cheetah] are a farmer services company, which is not what we actually are in practice!'.[180] Statements on the Cheetah website, like 'our entrepreneurial farmers can increase their income by 1000% in a single year', '5 to 10–fold production increases' and 'harvest prices rise typically 50–100% because they are given direct access to markets', are confusing and lack supporting evidence.[181]

Another point of confusion relates to the position of *dalali* within Cheetah's vision of commercialised smallholder agricultural value chains. As depicted in Figure 6.10, Cheetah sees middlemen as a major obstacle to smallholder agricultural development because they buy low and sell high, potentially leading to exploitation. This assessment clashes with their overall aim to commercialise and capitalise agricultural production as illustrated in the lower half of the diagram. In the theoretical literature on capitalism, middlemen are often presented as 'the means by which markets become perfect' as 'the seeking of profit by middlemen—buying low and selling dear—ensures that… the wheat reaches the stomach faster, more cheaply, and more reliably' (Munger 2011, p.203). It also clashes with Silverlands' view of the *dalali* system as an efficient and effective means of aggregating produce to enable the market buyer to benefit from economies of scale. From this perspective, the *dalali*, whose livelihood depends on profit-maximisation through negotiating and conducting exchanges, represent the epitome of a capitalist financial subject.

Similarly, the conceptual distinction drawn by Cheetah in Figure 6.10 between the 'open market' and 'capitalism' seems confused. A 'free' or 'open' market is defined as an economic system with prices based solely on supply and demand with little or no external regulation (Bremner 2009). Buyers and

[180] Interview with Marco Johnson, Cheetah Development Vice-President Field Operations and President of Pearl Foods, Iringa, 12/09/2015.
[181] http://www.cheetahdevelopment.org/

sellers exchange goods and services in voluntarily and mutually agreed transactions. In comparison, the 'capitalist' system is based on the ownership of the factors of production, and therefore the potential for market manipulation (Bremner 2009; Collins 1980; De Landa 2000). This leads to competition and the maximisation of private profit; a functioning capitalist system can produce monopolies, the stifling of free trade, and exploitative relations. Cheetah has, therefore, conflated middlemen and price finding with rent seeking behaviour and exploitation through the formation of monopolies, which can occur in a capitalist system. This means that Cheetah's criticisms of the 'open market', equated with the *dalali* system, are also criticisms of the capitalist system that they valorise.

It appears that Cheetah aims to treat the problems of capitalism by applying more capitalism through establishing its own parallel value chain to that already existing between farmers, *dalali,* and market buyers in Iringa Region. Like the middlemen, Cheetah also aims to corner the market. Cheetah as a social impact investor, however, views their parallel value chain as being based on more moral and equitable capitalist relations than the *dalali* system they aim to replace. Through these new value chains, Cheetah attempts to build what they perceive to be more ethical socio-economic relations, underpinned by an assemblage of financial and commercial norms and disciplinary forces that shape mindsets and behaviours. The Cheetah model envisages these more ethical socio-economic relations to consist of transparency surrounding costs and prices, providing affordable and accessible high-quality inputs, linking farmers up to market buyers who provide a good price, and disciplining farmers through enforcing repayment. Johnson expresses this sentiment as:

> *'what we are trying to do is eliminate the middlemen, and in a way we are kind of a middleman, but middleman has such a negative connotation to it. Dalali is what the Tanzanians call it. The dalali are bastards. We really want to be transparent with the farmers. We bring our own scales to weigh the maize. We do all the math in front of them. They sometimes say that the dalali don't charge for the bags and for the thread and the lifting, but of course they do but you just don't see it.'*[182]

Through attempting to construct their model as consisting of more ethical socio-economic relations, Cheetah relies on a similar premise to the fair trade movement that aims to enhance the 'niceness' of capitalist development (Goodman 2004). This involves working both within and against existing market relations by challenging ways of trading that replicate cycles of poverty (Raynolds 2000; Goodman 2004; Whatmore & Thorne 1997). Cheetah's parallel value chain aims to leverage SII and commercial finance in order to initiate human development through the establishment of more

[182] Interview with Marco Johnson, Cheetah Development Vice President Field Operations and President Pearl Foods, Iringa, 12/09/2015.

equitable and reliable value chains. Cheetah claims to put the interests of smallholder farmers first, as 'protecting the interests of the smallholders is not only the right thing to do, it is the smart thing.'[183]

Questions need to be asked, however, about the extent to which Cheetah's parallel value chain (that continues to operate within capitalist logics of profit maximisation) overcomes incompatibilities between financial models and agricultural livelihoods, and whether it represents more ethical socio-economic relations for smallholder farmers than the *dalali* system. As they themselves claim: 'Cheetah doesn't want to be a disrupter. Cheetah brings innovations that help the existing industry succeed'.[184] It is important to also consider the 'dark side' of micro-lending, 'micro-debt', and how 'immoral' aspects of agricultural loan provision may be masked under the rhetoric of working with farmers as partners to bring about social as well as financial impacts. Indebtedness linked to the expansion of the microfinance industry in, for instance, India, highlights the challenge of taking agri-finance to scale, and the unanticipated negative consequences that well-intentioned initiatives may have (see Rhyne 2010; Mader 2013; Hulme 2000; Taylor 2011). Whether Cheetah succeeds in establishing more ethical socio-economic relations for smallholder farmers is explored in more depth in Chapter 8.

Tensions also arise when examining how Cheetah perceives farmers as 'entrepreneurs', and how they approach interactions with them as a result. Cheetah aims to transform smallholder farmers into an investable and entrepreneurial capitalist middle class that fills a particular place in agricultural value chains. According to Cheetah, alleviating poverty, the commercialisation of smallholder farming, and the establishment of farmers as creditable business partners are means to an end in achieving this aim, as 'a sustainable value chain cannot be built on the backs of the permanently poor'.[185] Establishing smallholder farmers as 'profitable' and 'investable' business partners is, therefore, a major focus of the model:

> *'We manage smallholder farmers with the foundation assumption that they must become profitable commercial farmers that can participate in the supply chain as reliable suppliers... We train farmers so they can generate profits, repay input loans, and aggregate crops in quantities that are sufficient for agribusiness supply chains.'*[186]

[183] Cheetah Development (2016) *Extreme Impact Investing* presentation. See Figure 7.6.
[184] Cheetah Development (2016) *Farmer Management Model* presentation, Slide 8.
[185] Cheetah Development (2016) *Extreme Impact Investing* presentation, slide 11. See Figure 7.1.
[186] http://www.cheetahdevelopment.org/what-we-do-1/

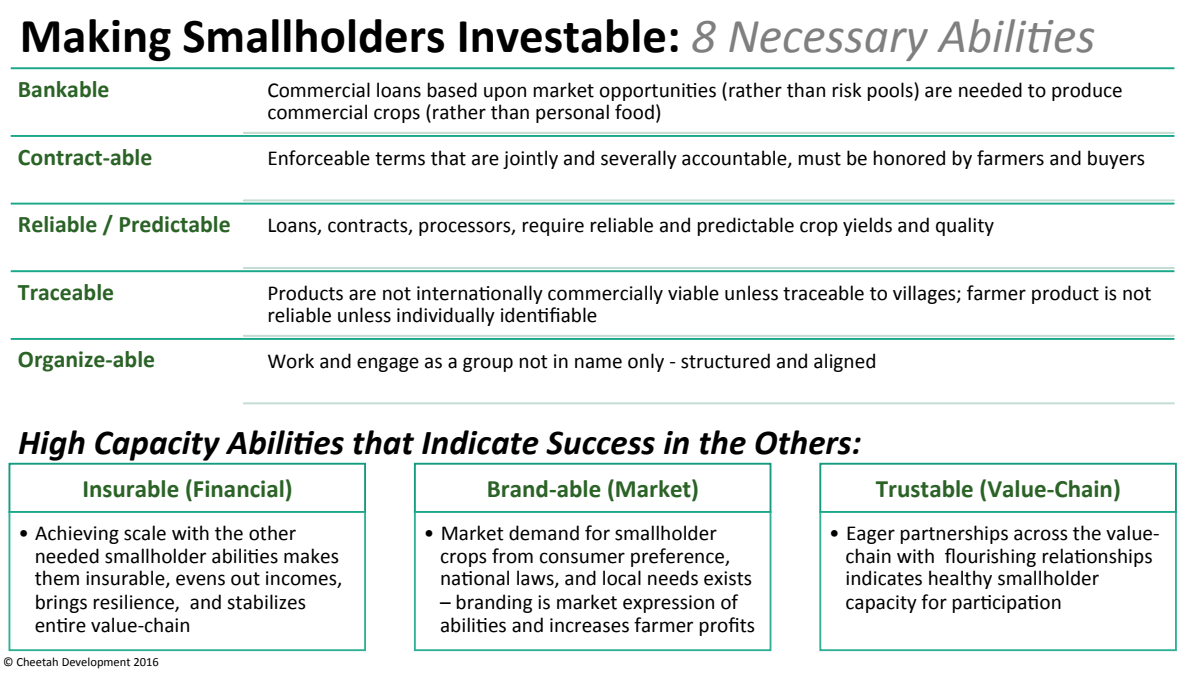

Figure 6.15 How Cheetah aims to make farmers 'investable'.[187]

As depicted in Figure 6.15, Cheetah defines 'investable' as comprising being 'bankable', 'contract-able', 'reliable and predictable', 'traceable', and 'organize-able'. Despite the Cheetah literature promoting smallholder farmer entrepreneurship, the means by which they try to do this are paternalistic and prescriptive. Cheetah aims to manage and discipline farmers to demonstrate to them the 'link between hard work and profit', and to 'start a shift in mind-set', presumably away from subsistence farming towards 'market awareness' as rational capitalist farmers with responsibility for their own development.[188] In other words, Cheetah attempts to shape farmers to fill a particular role in the assemblage. According to Johnson, 'making someone bankable for the first time, it is a big deal for them… you have to spoon-feed it to them sometimes'.[189] Cheetah is using prescriptive debt relations as a mechanism of disciplinary power to bring about desired changes in behaviour and mindsets.

Figure 6.16 highlights ten areas where Cheetah attempts to 'manage' farmers to bring about these changes in behaviour and mindsets. The contradiction between the emphasis on entrepreneurship in the Cheetah model, and discipline in practice, is explored in more detail in Chapter 8. The perceived need to change farmer mindsets is not unique to Cheetah. A report on SII in African agriculture by the Project Terragua working group reporting to the GIIN also mirrors this perspective: 'the peasant

[187] Taken from: Cheetah Development (2016) *Farmer Management Model* presentation, slide 6.
[188] Cheetah Development (2016) *Extreme Impact Investing* presentation, slide 6.
[189] Interview with Marco Johnson, Cheetah Development Vice-President and President Pearl Foods, Iringa, 12/09/2015.

farmers' mindset has to be changed from a subsistence orientation to one which is more commercialised' (Riddell 2009, p.27).

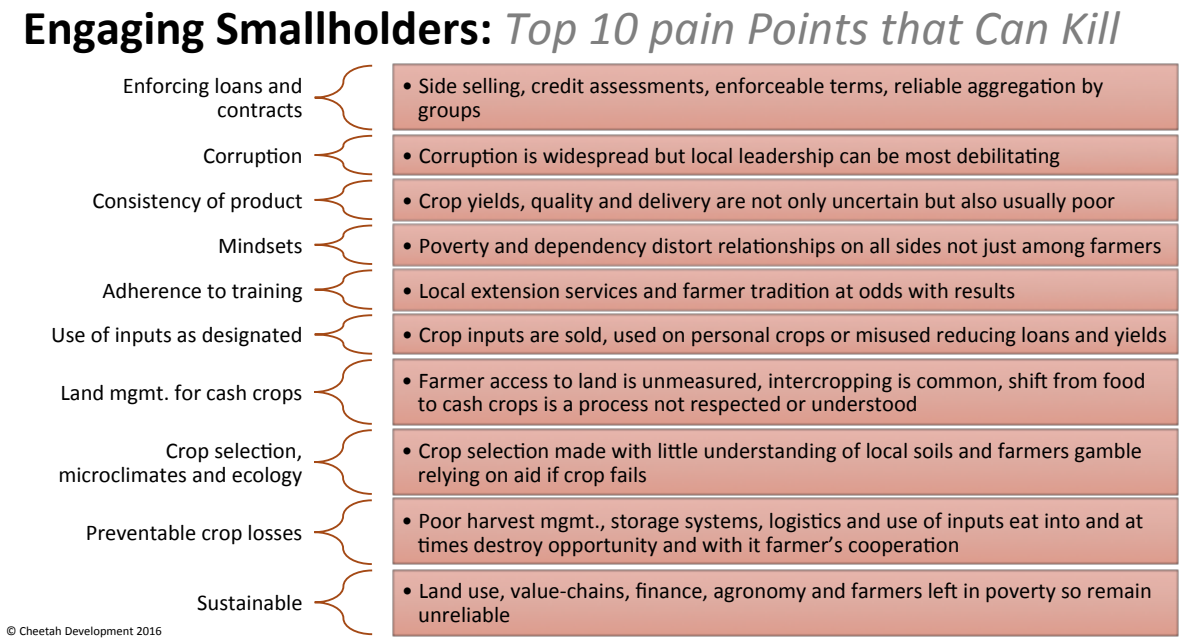

Figure 6.16 Ten ways in which Cheetah aims to 'manage' farmers.[190]

Key examples of how Cheetah works to 'manage' and 'discipline' farmers is through the provision of loans in kind rather than in cash, and requiring the loans to be repaid in produce. Gentilini (2016, p.8) explains this logic as 'in-kind represents a vehicle to changing behaviours, especially when people may not be well informed… which challenges the assumption that people know best'. Rather than promoting calculated and self-interested free choice by empowered entrepreneurial farmers, Cheetah does not appear to trust farmers to make rational decisions about how and what to farm, as a 'shift from food to cash crops is a process not respected or understood' by farmers (see Figure 6.16). Instead, they attempt to discipline farmers into behaviour changes through the mechanism of providing in-kind loans and requiring repayment in produce to foster a focus on growing maize commercially, potentially at the expense of 'personal crops' and other commercial crops (see Figure 6.16). According to Cheetah marketing material, the solution to agricultural development lies in rigidly enforcing a particular vision of the future: 'Not optimism. Not education. Instead a discontinuous view of the future that could be. A vision so clear and real that they see it, too.'[191] This raises questions about how 'entrepreneurship' is defined and what limits are placed on its expression.

[190] Taken from: Cheetah Development (2016) *Farmer Management Model* presentation, slide 4.
[191] Cheetah Development (2016) *Poverty is in the Mind* presentation, slide 4.

6.7. Summary

This chapter has explored how the concept of SII is translated and implemented in the Tanzanian agricultural context. There are a variety of actors operating in Iringa Region that embrace SII, but who understand it in different ways, for example Silverlands, the SAGCOT, and Cheetah. Although these organisations are united around the aim of building more ethical socio-economic relations in the Tanzanian agricultural sector, variations in the ways in which they translate and attempt to achieve this, and differing perspectives on their respective roles, undermine the SII assemblage and create points of fragility.

The rest of this chapter focused on Cheetah as a key node through which farmers in Lower Kilolo interact with finance and are therefore enrolled into the SII assemblage. Cheetah is an agricultural social impact investor that runs operations in the Iringa Region of Tanzania. It is a social impact investor in two ways: 1) it receives funds from investors who expect a financial return; 2) it invests in smallholder farmers for social and financial impact. Cheetah diagnoses the challenge of agricultural development in Iringa Region as comprising of two issues: lack of economy and problematic farmer mindsets. By framing a lack of economy as the major barrier to agricultural development, they construct the private sector as the solution, rather than states or NGOs. Focusing on farmer mindsets enables Cheetah to avoid dealing with structural issues and instead shift responsibility onto the farmers.

As a solution, they propose the Pearl Foods programme. This involves the provision of high yielding maize seeds and synthetic fertiliser on credit, which the farmers repay in produce after the harvest. The produce is then sold on to a market buyer, Silverlands, and any profit after Cheetah has repaid all their debts to the bank and taken their cut is placed in the farmers' bank accounts. In this way, Cheetah envisions the construction of parallel value chains that incorporate entrepreneurial smallholder farmers as 'partners'. Although Cheetah appears to play a role similar to the *dalali* in these parallel value chains, they assert their uniqueness as building more ethical socio-economic relationships.

The ways in which Cheetah attempts to implement these parallel value chains are, however, prescriptive, and based on the exertion of disciplinary power relations. Although Cheetah ostensibly promotes the development of entrepreneurial smallholder farming, they do not seem to trust farmers to make rational decisions over how to improve, expand, and commercialise their agricultural production. Instead, they render farmers 'creditworthy', 'bankable', and 'investable' by applying rigid and paternalistic prescriptions surrounding the form of the loans, how they are to be used, and how

they are to be repaid. In this way, Cheetah's parallel value chains are assembled as ethical capitalism as they are perceived by Cheetah to be more equitable, reliable, and transparent than the *dalali* system. As a result, Cheetah attempts to build an assemblage of financial and social norms and disciplinary forces to shape mindsets and behaviours to adhere to their model. Questions emerge, however, about whether this Cheetah model actually represents more ethical socio-economic relations for farmers in Lower Kilolo District. The following chapter explores the livelihoods and moral economies of those farmers, before Chapter 8 investigates what happens when they interact with the 'ethical capitalism' of the Cheetah model.

7. Farmer Livelihoods in Lower Kilolo

7.1. Introduction

To understand the implications of farmer engagement in the Cheetah programme, I investigated farmer livelihoods in Lower Kilolo. According to Chambers & Conway (1992), a livelihood can be defined as 'a means of living, and the capabilities, assets, and activities required for it'. Although its roots are much older, the livelihoods framework has been popular since the 1990s as a means of challenging top-down and modernising approaches to development that focus on a single sector (Chambers & Conway 1992; Scoones 1998). Studying livelihoods encourages sensitivity to the diverse ways in which people make a living, their 'complex bricolage', 'web', or 'portfolio' of activities, as well as historically, culturally, and socially embedded institutions and relationships that facilitate resource access and use (Scoones 2009; De Haan 2012). Emphasis is placed on the multiple ways in which people adapt, improve, diversify, and transform their ways of living in the world, drawing attention to agency, opportunities, and entitlements (Chambers 1983a; Sen 1981). Over time, there has been a push for greater plurality and hybridity in livelihoods approaches, moving beyond purely economic measures to take into account multiple types of resources that shape capabilities at varying scales, as well as more inclusive understandings of wellbeing, poverty, constraints, and power relations (Scoones 2009; Scoones 1998; De Haan 2012).

This chapter explores the multiple and overlapping ways in which farmers construct their livelihoods and moral economies to ensure their own subsistence, and how they participate in vibrant socio-cultural and socio-economic relationships both within the village and beyond. I firstly present an overview of farmers' diverse, and often innovative, income sources. I then examine the major livelihood source of farming and discuss crop mix, land tenure, and farming practices. Maize is the major crop, and I examine how it is cultivated, how it is drawn into a variety of sometimes competing assemblages, and how uses for the harvest are prioritised. Maize is called upon in many different contexts, and plays a variety of important roles in village life, for example in spiritual relationships, in saving practices, and in socio-cultural relations. Finally, I discuss the complex socio-economic relationships that farmers engage in to support their livelihoods, for example borrowing and lending. These relationships have dynamic and flexible material and temporal contours, which provide farmers with alternative coping pathways in times of personal hardship or bad weather.

7.2. Livelihood Activities

7.2.1. Diverse livelihood activities

Rural people in Lower Kilolo are primarily farmers who grow maize to meet their subsistence needs, but will sell any surplus. Maize also plays multiple other roles within the community, which will be discussed later in this chapter. Alongside maize, a wide range of other crops and vegetables are grown for both domestic consumption and sale. Aside from farming—which is discussed in following sections—rural people access a range of income sources that shape capabilities and facilitate flows of capital, and have implications for socio-political and economic relationships within and between families. Diversification into alternative income streams provides a cash buffer in years of low harvest, and provides a source of income to invest in farming. These other income sources can be separated into *kazi* (work), *biashara ndogo* (small business), livestock keeping, and seasonal labour.

Discussing livelihood diversification with farmers presented a challenge of translation. I had originally been asking farmers *'Je unafanya kazi nyingine?'*, which translates as 'do you do other work?' I often received a negative answer, until one woman told me that she did not do other work (*kazi*), but she did do small business (*biashara ndogo*).[192] A distinction is drawn between *kazi* as more formal employment, for example as a builder, watchman, teacher, or shop owner, and *biashara ndogo* which includes running stalls for vegetables and roast meat, and making *maandazi* (doughnuts) or *pombe* (local alcohol). 35%[193] of the farmers (n=107 unless otherwise stated) replied that they had other income sources, be it *kazi* or *biashara ndogo.* There are distinctly gendered categories of small business, with jobs like selling roast and raw meat done mainly by men, and making and selling *maandazi* and *pombe* mainly carried out by women.

Another major livelihood stream within the village is livestock keeping. While some farmers take up livestock keeping as their primary source of income, many farmers aim to possess a few cows, goats and chickens to supplement their income. 20% owned at least one cow, and this is in line with government statistics that 26.1% of people in Iringa Region participate in both crop production and cattle husbandry, with an estimated 42,000 head of cattle in Kilolo District (URT 2011). A cow provides multiple income opportunities. As well as for personal use, the milk, meat, and manure for *samadi* (fertiliser) can be sold, and the cow itself can be sold or hired out to work on the fields of other people. Figure 7.1 depicts cattle being herded through the centre of Kipaduka towards the livestock pen to the left of the image.

[192] Interview with farmer 22, Kitelewasi, 21/09/2015.

[193] This may be an underestimate due to the initial confusion in Lusaula surrounding what classed as 'work' and 'income'.

Figure 7.1 Cows in Kipaduka, 2015.

If they are in need of cash during the year, farmers may hire themselves out as seasonal labour on the farms of other people. 42% of farmers reported that they had worked on the fields of others for cash at some point in their lives, and 9% of those conducted seasonal labour only in their youth. 28% had hired labour to work on their own farms for cash, and 10% had both worked for cash and hired seasonal labourers. Seasonal labour is commonly carried out by younger men, for example younger sons. As well as being a regular source of income for some, wage labour is also a way of obtaining an injection of capital to cover the cost of large investments, for example purchasing a cow, ceremonies, or emergencies. Patterns of seasonal labour are complicated by the parallel practice of *mgowe* communal farming, which has traditionally provided social support to the poorest farmers in the community and is discussed in more detail in Section 7.3.1.1.

Although multiple and overlapping income sources are found in Lower Kilolo, the most important is farming, with all the sample households participating. The following section discusses agricultural practices.

7.2.2. Farm characteristics and farming practices

7.2.2.1. *Shamba* (farm) and *bustani* (garden)

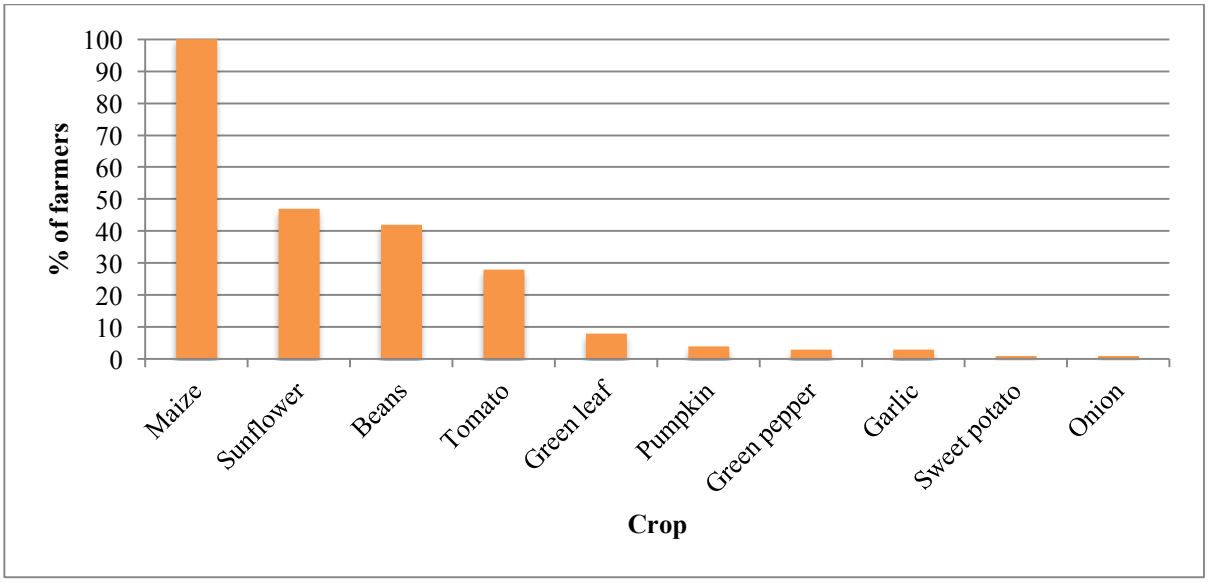

Figure 7.2 Bar chart depicting the different crops planted by farmers in Lower Kilolo (n=107).

Due to the variations in elevation and the proximity to the Ruaha River, farmers in Lower Kilolo are able to grow a wide range of crops: 'we are the farmers who cultivate different crops and not only maize' (see Figure 7.2).[194] The crop mix can be split into two groups based on cultivation in the *shamba* (farm) or *bustani* (garden). Maize (*Zea mays*) is grown in the *shamba* with sunflower (*Helianthu spp.*), and often beans (*Phaseolus spp.)* and sometimes tomatoes (*Solanum spp.)*. In the *bustani,* a range of vegetables is planted including tomatoes, onions *(Allium cepa),* green peppers *(Capsicum spp.),* green leafy vegetables, garlic *(Allium sativum),* pumpkin *(Curcurbita spp.),* and sweet potatoes *(Ipomoea batatas)*. Fruit is also cultivated, for example guava *(Psidium guajava)*, mangoes (*Mangifera indica)*, and bananas *(Musa spp.)*.

In Kitelewasi and Lusaula, the *shamba* tend to be on hill slopes, while there is a large community *bustani* cradled in the valley bottom. This *bustani*, shown in Figure 7.3, is irrigated using channels. There is no separate central *bustani* in Kipaduka or Vitono, but some people have constructed small vegetable plots near to their houses. 45% of farmers grew one or more types of vegetables and fruits that they keep for food or sell by the roadside, to *dalali*, or within the village.

[194] Interview with farmer 59, Vitono, 21/07/2016.

Figure 7.3 Community vegetable *bustani* near Kitelewasi and Lusaula, 2015.

Farmers often prefer to plant a range of crops that can be harvested at different times during the year. This risk-averse activity enables hedging against crop diseases, weather events, and pests, and also provides a rolling source of income and food. One farmer explained to me that he plants tomatoes, sunflower, and maize at the same time, but harvests them one after the other, each harvest providing an injection of capital to fund the harvesting of the next crop.[195] All the crops mentioned above can be used for subsistence or sold for cash. Farmers in Lower Kilolo therefore fit the classical description of smallholder farmers as following risk-minimising practices with partial engagement in markets (Ellis 1993; Netting 1993). There is a trend, however, for some crops to be categorised as grown for *biashara* (business), predominantly sunflower and tomatoes, or for *chakula* (food), typically maize and beans. One farmer explained that 'in our culture we always cultivate the food crops like maize and some cash crops like tomatoes.'[196]

7.2.2.2. *Shamba* characteristics and land tenure.

The mean farm size across the sampled farmers was 6.5 acres (n=107, sd=8.9) and the median was 4 acres. The smallest farm was 1 acre and the largest 50 acres. Farm size does not always directly correspond to agricultural output, as only a portion of the largest farms may be cultivated each year due to lack of labour or high costs of inputs and equipment, and a larger farm size does not necessarily lead to a higher yield per unit area. One woman in Vitono was referred to as a 'big farmer'

[195] Interview with farmer 66, Vitono, 06/10/2015.
[196] Interview with village chairman, Kitelewasi, 28/09/2015.

even though she only farmed 3 acres of maize, as she used high quality inputs and 'modern' methods and so achieved a high yield.[197] This was in comparison to another farmer who owned 40 acres, but just planted 10 with maize and only harvested one bag more.[198] 8% of the sampled farmers rented land, and just under half of these farmers also owned land. Figure 7.4 depicts the distribution of farm sizes across the sample.

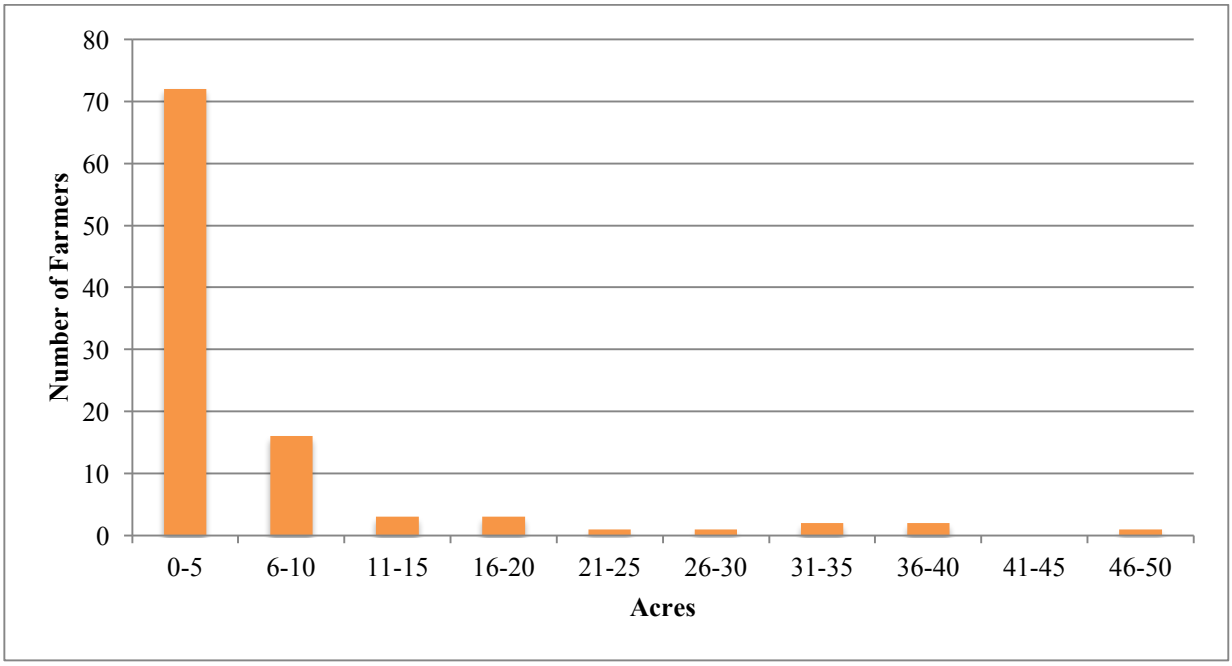

Figure 7.4 Frequency plot of farm size in Lower Kilolo District (n=107).

Land ownership in Tanzania is governed through a complicated merging of a historical commitment to public land ownership with a post–1995 recognition of the exchange value of land and protection of individual land rights (Nnkya 1998). Village Councils are granted 999 year leases from the government based on administrative boundaries that were drawn up during *ujamaa* villagisation, which occurred in 1974 in Lower Kilolo District (Stein & Askew 2009).[199] The legacy of villagisation is also inscribed in the distances between homes and farms. People were moved into nuclear villages near trunk or feeder roads, meaning that some have to walk for up to two hours to get to their farms from their homes, although others have moved back to their previous location. 17% of farmers' fields were around or very close to their house, 77% were between 1km and 5km away, and the remaining 6% farmed fields further than 5km away from their homes (see Figure 7.5).

[197] Interview with farmer 52, Vitono, 01/10/2015.
[198] Interview with farmer 50, Vitono, 01/10/2015.
[199] Interview with village chairman, Kitelewasi, 28/09/2015.

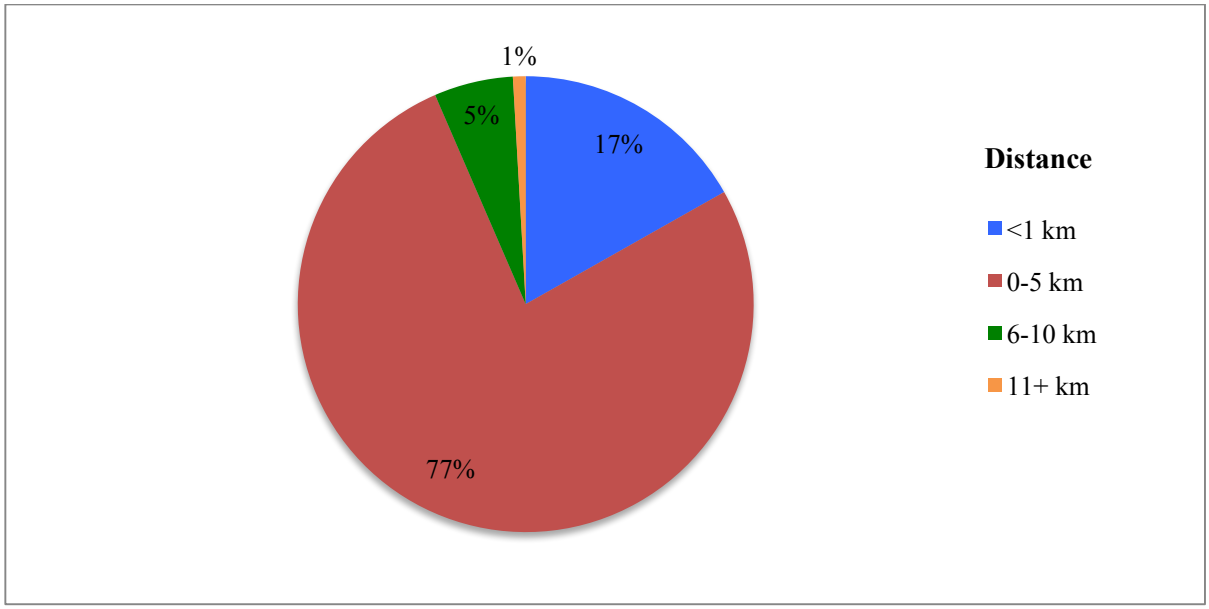

Figure 7.5 Pie chart of percentages of farmers based on distance between home and farm.

Within the villages, land ownership is generally based on customary tenure: 'there is local ownership of land in the village. It does not involve the government documents which can prove that land belongs to you'.[200] Current *shamba* sizes are shaped by land inheritance and subdivision. The family farm is traditionally split between male children (increasingly also female children), so the more children a family has the smaller the plots of land. Traditionally, land was held by men and not by women, but it appears that this is slowly changing. However, women still experience uncertainty over the security of their land if, for instance, they are widowed and the husband's family lays claim to the farm (Mfugale 2015; Shekighenda 2016).

Conflicts over land and boundaries do occur in Lower Kilolo. The village office possesses authority over land, as stipulated in the 1999 Village Land Act (Wily 2003; Sundet 2005). In 2005 in Kitelewasi, the village office ratified a proposal by a family to sell a piece of land dissecting the village to a Tanzanian large-scale farmer from Iringa town.[201] This decision was challenged by a group of villagers who claimed that the land was common property as it was used to graze cattle, and therefore was not available for sale. The dispute was taken to the District Court, which ruled in favour of the land sale. A fenced and irrigated commercial farm now partially dissects the village. A farmer in Vitono reported that he struggled with other farmers moving the sisal plants that form the boundaries of his farm, and with pastoralists and other farmers grazing cattle across his land.[202] At the village level, conflict arose between Vitono and Kipaduka when the village council of Kipaduka

[200] Interview with village chairman, Vitono, 07/10/2015.
[201] Interview with village chairman, Kitelewasi, 28/09/2015.
[202] Interview with farmer 50, Vitono, 01/10/2015.

allegedly moved the village boundary onto Vitono land to benefit from a telecommunications contract.[203]

These conflicts are partially related to the lack of land use plans in many villages. Progress is being made in land surveying, but it is slow and expensive. In December 2014, although 97% of villages in Kilolo had been surveyed, only 26 out of 106 had land use plans drawn up and implemented (URT 2013b; Mfugale 2014). In Kipaduka, some farmers had obtained official private land title documents with the assistance of Haki Ardhi, a land rights advocacy organisation based in Dar es Salaam. One farmer was able to tell me the precise size of his farm—15.92 acres—because he had obtained private land title in this way.[204] These farmers, however, are in the minority. Surveying and obtaining title deeds for a plot of land of less than 5 hectares costs an individual or a family TSh 150,000 (USD 67.31)[205], with a sliding price scale up to TSh 500,000 (USD 224.36)[206] for a plot of 50 hectares (Mfugale 2014; Stein & Askew 2009). This is out of reach of most farmers without support from organisations like Haki Ardhi.

7.2.2.3. Farming in the *shamba*

In the *shamba,* farmers grow maize, sunflower, millet, tomatoes, and beans. Farmers' views on intercropping in the *shamba* were divided between planting beans in between the rows of maize and sunflower, or splitting the farm up into sections and planting different crops in different areas. Tomatoes are never intercropped, and are always planted in a different area of the farm. Tomatoes and sunflower are widely cultivated in Lower Kilolo, with 35% of the sample planting sunflower and 25% planting tomatoes. Unlike maize, however, neither is a staple food source that forms the major reserve in times of hardship, and neither holds such cultural significance as maize. Although they are important for nutrition and variation in rural diets, they are often grown as business crops and form an important income source. This is especially the case as they are often planted to be ready in a staggered harvest with the maize crop to spread income injections over a longer period of time.[207]

Lower Kilolo, however, lacks reliable and high capacity markets for the produce. Buckets of tomatoes and jerry cans of unrefined sunflower oil lined up by the side of the road for sale to passing vehicles are a familiar sight. There are buildings presenting themselves as 'tomato markets' that were built by the American non-governmental organisation Technoserve, but these generally lie empty as they are away from the road, and buyers and sellers are more easily subjected to taxation surveillance if they

[203] Interview with village chairman, Vitono, 07/10/2015.
[204] Interview with farmer 86, Kipaduka, 19/10/2015.
[205] Conversion rate USD1: TSh 2228.56, 15/01/2016.
[206] Conversion rate USD1: TSh 2228.56, 15/01/2016.
[207] Interview with farmer 66, Vitono, 06/10/2015.

operate within them.[208] As for sunflower oil, the produce needs to be refined, labelled, and certified by the Tanzania Bureau of Standards and the Tanzania Food and Drugs Agency before it is attractive to wholesale buyers. The lack of accessible markets leads to crop wastage, and therefore wasted income for the farmer.

By far the most important crop is maize: 100% of the farmer sample cultivated maize in 2014-2015, and 13% of farmers only planted maize. Tanzania is ranked 15th on the World Health Organisation's list of maize consumption, with an average of 128g consumed per person per day (Ranum et al. 2014). National maize consumption is estimated at three million tons per year, and the crop is grown on 45% of all cultivated land (Kaliba et al. 2000; Bisanda et al. 1998). The Southern Highlands is, in general, a production surplus zone, and Iringa along with Mbeya are the highest maize producing regions in Tanzania (Rowhani et al. 2011; URT 2011). According to government statistics, maize constitutes the highest average acreage cultivated per household in Iringa (URT 2011). Maize has an ambiguous identity as a favoured staple food crop, providing over 50% of dietary calories and protein, and also as a major business crop contributing to household income (Bisanda et al. 1998).

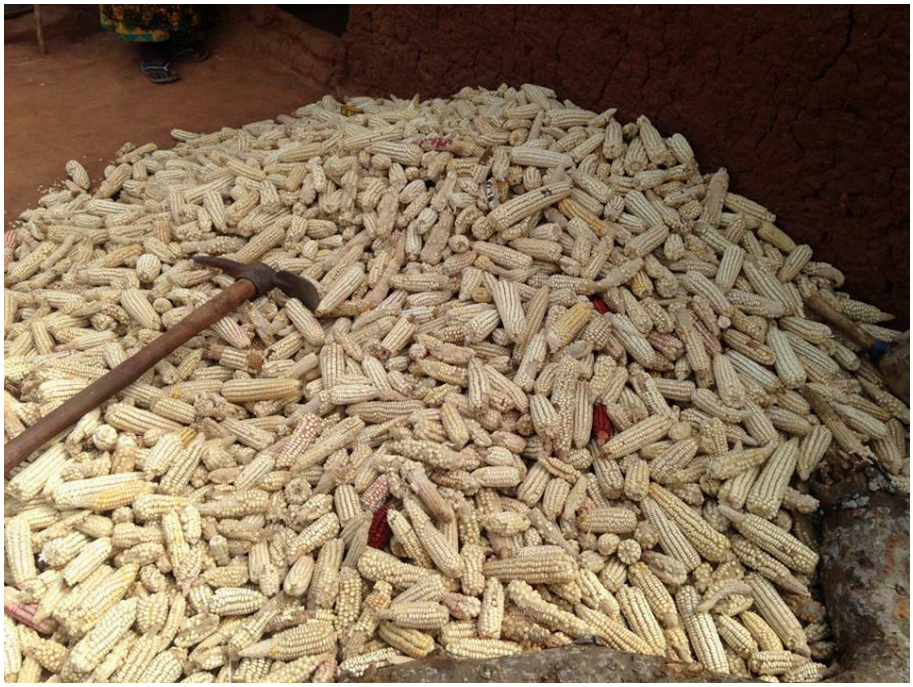

Figure 7.6 Maize harvest, Vitono, 2016.

Maize for human consumption can be cultivated as a vegetable, a grain, and for popcorn kernels. I will focus on maize as a grain. Maize seeds are distinguished into *kienyeji* (traditional) seeds that have been selectively bred by farmers for taste, appearance, and cultivation qualities over the past couple of

[208] Interview with Dr Anand Moro, Sembe Tofauti, Iringa, 05/11/2015. Interview with Edward Agaba, AGRA, phone, 21/11/2015.

hundred years, and *kisasa* (modern) varieties that are hybrids developed and supplied by agri-businesses like Tanseed, Seed Co., and Monsanto. In Figure 7.6 the larger and more uniform *kisasa* maize cobs can be distinguished from the smaller *kienyeji* cobs that are more diverse in size and colour. Even if farmers can afford to purchase *kisasa* seeds, they often continue to plant a small area of *kienyeji* seeds to hedge against the *kisasa* seeds failing to grow: 60% (n=86)[209]of farmers planted *kisasa* seed, and 44% (n=86) of those also planted *kienyeji* seed.[210] In other words, farmers hedge their bets as well as financiers.

It is possible to get much higher yields with *kisasa* seeds. In Vitono, it has only been since farmers started planting high quality hybrid seed, along with using 'modern' techniques, that they were able to get 30 or 40 bags of maize from one acre.[211] This is around three times more than they were averaging previously. To get high yields, however, the conditions have to be just right otherwise the hybrid seeds do not perform well. This includes the use of synthetic fertilisers, weeding at the optimum time, and sufficient and timely rains.[212] In comparison, according to farmers *Kienyeji* seeds will always grow.[213] Under certain conditions some *kisasa* seeds are also less desirable. Farmers in Kipaduka reported that there is a certain type of hybrid seed that is soft and more vulnerable to being eaten by birds than the harder *kienyeji* seeds.[214] This further demonstrates the risk-minimising nature of smallholder farming in Lower Kilolo: while the higher yields from hybrid seeds are recognised, farmers hedge their bets by continuing to farm *kienyeji* seeds alongside *kisasa* varieties.

There are various types of *kienyeji* seed with different growing characteristics. A farmer in Kipaduka planted two types of *kienyeji* seed: one that grew smaller but quickly and one that grew larger but slowly.[215] By using these two types of maize seed he could stagger his harvest and provide a safeguard against crop pests, diseases, and poor market prices. The *kisasa* seeds planted by farmers are crossbred hybrid varieties. The law has recently changed to allow field trials of genetically engineered crops in Tanzania, but there are still prohibitive liability regulations surrounding their commercial cultivation (Wa Simbeye 2013; Khisa 2015). Although there is a Kiswahili word for

[209] These statistics do not include data from Lusaula. I had been asking the question 'what kind of maize seed do you plant', but I realized that unless I asked if they also planted *kienyeji* seed, farmers were only telling me that they planted *kisasa*. In the other villages, therefore, I changed the question to 'Do you plant *kienyeji, kisasa*, or both?'

[210] Interview with farmer 53, Vitono, 01/10/2015. Interview with farmer 68, Vitono, 06/10/2015. Interview with farmer 79, 09/10/2015. Interview with farmer 80, Vitono, 09/10/2015. Interview with farmer 45, Kitelewasi, 23/09/2015. Interview with farmer 46, Kitelewasi, 23/09/2015. Interview with farmer 85, Kipaduka, 19/10/2015. Interview with farmer 87, Kipaduka, 19/10/2015. And more.

[211] Interview with farmer 50, Vitono, 01/10/2015.

[212] Interview with farmer 92, Kipaduka, 19/10/2015.

[213] Interview with farmer 92, Kipaduka, 19/10/2015. Interview with farmer 82, Vitono, 09/10/2015.

[214] Focus group with farmers, Kipaduka, 26/10/2015.

[215] Interview with farmer 94, Kipaduka, 20/10/2015.

'hybrid', *chotara*, most farmers refer to them as *kisasa* seeds or use the English. Hybrid seed can be bought at independent shops and those run by the Tanzania Farmers' Association. In 2013–2014, the market price of 10kg of *kisasa* maize seed was TSh 50,000 (USD 22.37)[216], while the same quantity of *kienyeji* seed could be bought for TSh 30,000 (USD 13.42)[217].

7.2.2.4. Maize cultivation calendar

Table 7.1 Maize cultivation calendar for Lower Kilolo District.

Task	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Harvesting												
Husking of maize												
Preparation of farms												
Planting												
Fertiliser use												
Weeding												

As detailed in Table 7.1, maize is harvested between June and August, and usually the cobs are husked soon after. Traditionally, maize is stored in *kihenge*, large woven baskets raised up off the ground to protect the maize from pests. While *kihenge* are still used, nowadays many farmers store their maize in *gunia* (sacks) in their houses or in storerooms (see Figure 7.7). Both of these storage systems pose problems, as pests can attack the maize and if the moisture level is too high the maize can rot. There is no large centralised storage facility in Kilolo District (URT 2011). There are private storage facilities, but these are not available for smallholder farmer use. Limited options for storage also increase the incentive and urgency to sell maize soon after the harvest, rather than waiting to get the best price.

[216] Conversion rate USD1 : TSh 2234.99, 19/01/2017
[217] Conversion rate USD1 : TSh 2234.99, 19/01/2017

Figure 7.7 Maize stored in *kihenge* (L) and *gunia* in a farmer's home (R), 2015.

As of October 2015, 48% of sampled farmers had sold some of the maize they harvested that year, 3% were waiting for a better price, and 6% would usually sell some but as their harvest in 2015 was small they were keeping it all for food. The final 43% did not normally sell any maize. Apart from those participating in a programme such as that run by Cheetah, farmers usually sell their produce to *dalali,* the door-to-door traders introduced in the previous chapter. To try to get a better price, some farmers with access to transport, such as a *pikipiki* (motorbike) or a bicycle, instead take their produce directly to market buyers or private individuals in the town.[218] Kilolo District is, on paper, well-connected to major markets due to the tarmac trunk roads that connect Iringa with Dar es Salaam, Dodoma, and Mbeya Town (URT 2011). In practice, however, the lack of public transport links, poor dirt road quality away from the trunk roads, and lack of direct relationships between producers and processors mean that the options for selling produce tend to be limited to the *dalali,* or opportunistic sales by the roadside. This is also problematic because Kilolo District, generally an area of surplus production, is adjacent to Iringa District which, due to much drier conditions, often suffers from a production deficit (URT 2011).

There are two major bulk buyers of maize in the district: Silverlands, which was discussed in the previous chapter, and the National Food Reserve Agency (NFRA), which buys maize at near market prices and redistributes it to areas of deficit (URT 2011). The NFRA, however, lacks the budget to fill its stocks, sometimes creates price distortions, and usually buys from middlemen rather than directly

[218] Interview with farmer 37, Kitelewasi, 22/09/2015. Interview with farmer 39, Kitelewasi, 22/09/2015.

from the farmers. The NFRA has a storage capacity of 240,000 tons of maize, rice, and sorghum, but as of September 2016 the reserve was only 67,506 tons (Banzi & Tairo 2016).

In October and November, the farms are prepared by clearing away the maize residue. During harvesting, only the maize cobs are removed leaving the stalks and leaves intact in the fields. A common method for clearing this maize residue is burning, but this is now widely advised against as it scorches the earth and heightens the risk of uncontrolled fires during the dry season. After the farms have been cleared, they are tilled with a *jembe* (hoe), with a cow and *jembe*, or with a tractor (see Figure 7.8). Only one of the farmers in the sample of 107 owned a tractor, but he said it was weak and not very effective.[219] A minority (12%) could afford to rent a tractor. It is estimated that in 2011 there were forty tractors in Kilolo District (URT 2011). About a third of farmers had their own cow to use for tilling, and farmers who did not own a cow could rent one if they can afford it. Different combinations of equipment may be used at different stages in the planting season, on different areas of the farm, and in different years depending on disposable income. One farmer told me that he mostly used a rented tractor, but he used a rented cow on one area of his *shamba* where there are lots of trees.[220] Cows and tractors can be rented from within the village, from other villages, or from the nearby town.

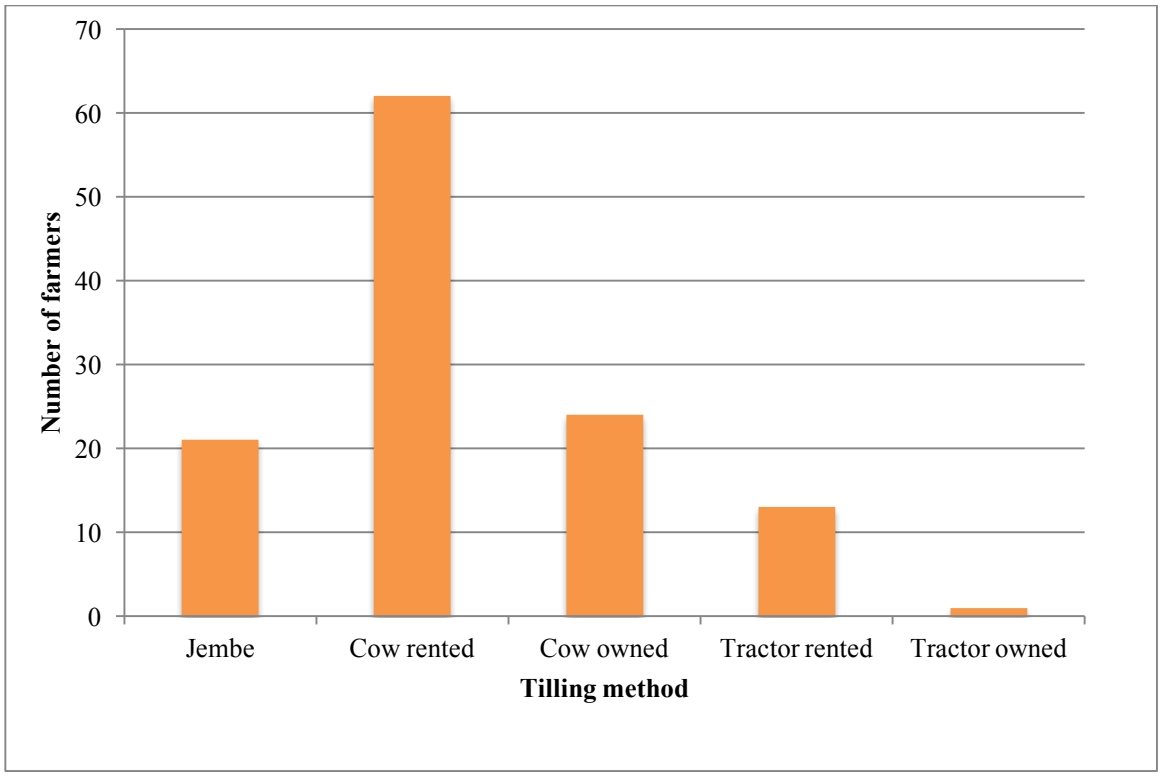

Figure 7.8 Number of farmers (n=107) using different tilling methods.

[219] Interview with village chairman, Vitono, 07/10/2015.
[220] Interview with farmer 55, 01/10/2015.

Owning a tractor or a cow is a sign of relative wealth (and of an entrepreneurial investment strategy), due to the capital cost of purchase and the extra income streams provided.[221] This disputes the common trope that smallholder farmers do not invest. Cows, for instance, are expensive to buy—often over TSh 1 million (USD 449)[222]—and provide alternative income streams from renting them out, and from selling the milk, manure, and meat. Cattle ownership, however, is not a comprehensive proxy for wealth: 10% of the sample did not own cattle, but could afford to farm with a rented tractor.[223] Cows may be inherited, but tractors are currently only acquired, and so are taken as a sign of success through hard work. Ability to hire a cow or tractor is also a sign of relative wealth in comparison to those farmers who lack the surplus capital to invest in farming equipment.

Planting occurs with the onset of the rains, usually in late November or December. There is some uncertainty over when is the best time to plant as there is usually a period of inconsistent rainfall before the rainy season starts. Traditionally, farmers aim to plant as soon as the first drops fall, but this can have negative impacts for seed germination if the rains are initially inconsistent.[224] To add to this complexity, in Iringa Region the timing of the onset of the rains is becoming more variable, and can range from early October to the beginning of December. Over the past 28 years the rains have started at Kibebe Farm in Iringa Region in October for 7 years, and not until December for 8 years.[225] Consequently, the Syngenta field agent for the Southern Highlands recommended that farmers instead wait until there is consistent rainfall to plant.[226]

In recent years there have been some changes to planting practices. The traditional method is to walk along pouring the seeds into the soil by hand, often behind a cow and *jembe* while tilling the land. Agricultural development organisations and government agronomists, however, have introduced a new method using a *kamba* (rope made from plaited sisal) to measure a grid in the farm for planting (Figure 7.9). The seeds are then planted one by one in evenly spaced holes dug in straight lines along the *kamba*.[227] Only one seed is planted to prevent the seedlings competing for water, nutrients, and light.

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[221] Focus group, Kitelewasi, 15/09/2015. Focus group, Vitono, 02/10/2010.

[222] Conversion rate USD1 : TSh 2226.97, 16/01/2017.

[223] Interview with farmer 45, Kitelewasi, 23/09/2015. Interview with farmer 51, Vitono, 01/10/2015. Interview with farmer 54, Vitono, 01/10/2015. Interview with farmer 55, Vitono, 01/10/2015. Interview with farmer 59, Vitono, 01/10/2015. Interview with farmer 78, Vitono, 09/10/2015. Interview with farmer 84, Vitono, 09/10/2015. Interview with farmer 80, 09/10/2015. Interview with farmer 81, Vitono, 09/10/2015. Interview with farmer 84, Vitono, 09/10/2015.

[224] Interview with Eliza Post, Cheetah Development Field Officer, 27/10/2015.

[225] Interview with Richard Phillips, Kibebe Farm, Iringa, 04/08/2016.

[226] Participant observation with Syngenta field staff, Njombe, 09/11/2015-13/11/2015.

[227] Focus group with Cheetah Development farmers, Kitelewasi, 24/09/2015. Focus Group with Cheetah Development farmers, Vitono, 02/10/2015. Interview with farmer 86, Kipaduka, 19/10/2015.

Figure 7.9 Using a *kamba* for planting in Lusuala, 2015.

The *kamba* technique has been adopted by farmers who are members of agricultural development organisations such as Cheetah, and also by non-members who have attended training sessions and seen the demonstration plots, or learnt about the benefits from other farmers.[228] Yield improvements have been noted even when using 'modern' methods with *kienyeji* seeds. In Kitelewasi, farmers noted that there was some unease about these 'modern' methods when they were first introduced in the village.[229] Some were wary that if they only planted one seed in each hole, and that seed didn't germinate, then they would have wasted space on their farm.[230] An elderly farmer reported that these modern agricultural techniques do lead to higher yields, but they pose challenges that 'break you down', and he did not have the *nguvu* (strength/vitality) to carry out the extra processes such as marking straight lines with the *kamba*.[231]

[228] Interview with farmer 86, Kipaduka, 19/10/2015. Interview with farmer 94, Kipaduka, 20/10/2015. Interview with farmer. Focus group with Cheetah Development farmers, Kitelewasi, 24/09/2015. Interview with farmer 103, Kipaduka, 21/10/2015.

[229] Focus group with Cheetah Development farmers, Kitelewasi, 24/09/2015. Interview with farmer 43, Kitelewasi, 23/09/2015.

[230] Focus group with One Acre Fund Farmers, Kitelewasi, 25/09/2015. Interview with farmer 43, Kitelewasi, 23/09/2015.

[231] Interview with farmer 86, Kipaduka, 19/10/2015.

Figure 7.10 Planting maize in Lusaula, 2015.

In December 2015, I conducted participant observation during the planting season with a family in Lusaula.[232] The family (husband, wife, and eldest son) was planting three acres of maize at their farm about 1km from their home. The maize residue from the previous harvest had been burnt off, and the farm had already been ploughed using a rented cow and *jembe*. The husband and son used a *kamba* to demarcate a straight line along the edge of the farm. Then the husband, wife, and son used *jembe* to dig evenly spaced holes along the *kamba*, as shown in Figure 7.10. They taught me how to use a *jembe* to dig the holes, and then tasked my research assistant and me with following behind them, placing two maize seeds in each hole, and covering it with a thin layer of soil. This family had not received formal training on 'modern' techniques, but had learnt about the benefits of the *kamba* method from farmers in a neighbouring sub-village. They had adopted the *kamba* method, but continued to plant two seeds in each hole as a form of risk-minimisation based on the belief that two seeds gave them two chances of cultivating a healthy maize plant so no space in the farm would be wasted. While we worked we talked and sang songs. Normally, the family would spend one day digging the holes and plant the seeds the following day, but with two extra labourers we managed to plant a quarter of an acre on the first day.

Once the maize seeds have been planted the focus shifts to fertilising and weeding. While not all farmers use fertiliser due to a lack of capital and access, those who do typically fertilise the crops shortly after planting, and then again when the maize grows to about one foot high. Two types of

[232] Participant observation of maize planting, Lusaula, 03/12/2015.

fertiliser are used: *samadi* (manure), and *chumvichumvi* (synthetic). A range of synthetic fertilisers is available, and often a combination is used. These include diammonium phosphate (DAP), calcium ammonium nitrate (CAN), nitrogen, phosphorous and potassium (NPK), and urea. In 2013–2014, DAP was the most expensive costing TSh 71,500 (USD 31.99) for 50kgs, followed by urea at TSh 60,000 (USD 26.85), and CAN at TSh 48,000 (USD 21.48).[233] 80% of farmers usually used fertiliser, with 12% using only *samadi*, 51% using only *chumvichumvi*, and 17% using a combination of the two. One farmer in Vitono showed me how he was experimenting with different types of *samadi* and *chumvichumvi* fertilisers on different areas of his farm (Figure 7.11).[234] This provides another example of farmer innovation.

Figure 7.11 A farmer in Vitono experimenting with different types of fertiliser, 2015.

Samadi is often preferred, as after one application the soil stays fertile for a few years, while *chumvichumvi* has to be applied every year or the soil becomes infertile.[235] The supply of *samadi* is, however, controlled by livestock owners who tend to use the resulting manure on their own fields.[236] *Chumvichumvi* can be bought in local agricultural input shops, and is also provided by organisations

[233] Conversion rate USD 1 : TSh 2234.99, 19/01/2017. Price data provided by the Iringa District Council. No price was recorded for NPK.

[234] Interview with village chairman, Vitono, 07/10/2015.

[235] Interview with farmer 86, Kipaduka, 19/10/2015. Interview with farmer 27, Kitelewasi, 21/09/2015. Interview with farmer 49, Kitelewasi, 23/09/2015. Interview with farmer 43, Kitelewasi, 23/09/2015. Interview with farmer 59, Vitono, 01/10/2015. Interview with farmer 57, Vitono, 01/10/2015. Interview with farmer 75, Vitono, 08/10/2015.

[236] Interview with farmer 89, Kipaduka, 19/10/2015. Interview with farmer 103, Kipaduka, 21/10/2015. Focus group with farmers, Mjiwema, 18/08/2015. Focus group with farmers, Ihokelo 17/08/2015. Interview with village chairman, Kitelewasi, 28/09/2015. Interview with farmer 62, Vitono, 06/10/2015.

like Cheetah on credit. A minority of farmers had in the past accessed synthetic fertiliser from a government subsidy scheme that ran from 2008–2015, but it was stopped due to corruption and high costs. Farmers joked that the fertiliser provided through the subsidy scheme seemed to be so nutrient poor that it was as if 'the government had dug soil' to sell to the farmers.[237]

Weeding is time and labour consuming.[238] It is usually conducted three weeks after planting, and then again two or three times after three-week intervals.[239] In Lusaula, a farmer declared that weeds were the major constraint on increasing productivity as they stifle maize growth and mean that he cannot afford to plant a larger area of his farm due to the increased labour cost of weeding.[240] Companies like Syngenta sell herbicides in the region, but they are often too expensive for farmers to purchase.[241]

7.3. Social relations of farming

7.3.1. Divisions of labour

7.3.1.1. Divisions of labour within the village: *mgowe*

Traditionally, farmers in Lower Kilolo cultivated through *mgowe,* a form of communal production practiced by the Bena, Hehe, and Kinga people in the Southern Highlands. The practice has a long history across East Africa, and is given different names by different groups: amongst the Iraq in Northern Tanzania it is called *slaqwe,* and in Rwanda it is called *ubudehe* (Mwelelwa 2008; Edwards 1998). It is a call to collaborate and work together to solve problems, and forms a social safety net in times of hardship or hard work. In the Southern Highlands, *mgowe* traditionally took three forms: a call by a leader for the community to work together to achieve a task with food usually served to all each day, a call by a polygamous man for all his wives and children to come together to work, and a call by household heads for people to work together on a rotational schedule to complete an activity on each other's farms. The latter has been the most persistent form over time. While *mgowe* has been identified in a range of activities including livestock slaughtering and construction, in Lower Kilolo it most commonly involves farmers coming together, especially at weeding and harvesting, to draw up a rotational schedule for collaborative work on each other's farms. The owner of the farm that is being cultivated is responsible for feeding the workers for that day.

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[237] Focus group with Cheetah Development farmers, Vitono, 02/10/2015. Focus group with farmers, Kipaduka, 26/10/2015.

[238] Interview with farmer 106, Kipaduka, 21/10/2015. Interview with farmer 49, Kitelewasi, 23/09/2015. Interview with farmer 71, Vitono, 08/10/2015. Interview with farmer 78, Vitono, 09/10/2015.

[239] Focus Group with One Acre Fund farmers, Kitelewasi, 25/09/2015. Focus Group with One Acre Fund farmers, Vitono, 06/10/2015.

[240] Interview with farmer 1, Lusaula, 10/09/2015.

[241] Participant observation with Cheetah Development and Syngenta field teams, Njombe, 09/11/2015-13/11/2015.

Mgowe is still practiced in Lower Kilolo, but its role as a social support structure has waned over time due to a combination of historical and practical reasons. These include associations with communal farming during *ujamaa* villagisation; challenges of timetabling activities to ensure that all farmers complete tasks at the optimum time; concerns about dishonesty and lack of effort; and expanding access to capital meaning that farmers would rather pay for seasonal labour. While 15% of farmers still claim to engage in *mgowe,* more commonly farming activities are carried out by family labour, possibly with the addition of hired seasonal labour during planting, weeding, and harvesting.[242]

> *'**Participant:** During socialism there were ujamaa farms where we use to work together with one spirit. It failed due to disunity and poor commitment within the members, and also there was corruption which made some people benefit more than the other members.'*
>
> *...*
>
> ***Interviewer**: Do you use mgowe in agriculture activities?*
>
> ***Participant**: We do not use mgowe.*
>
> ***Interviewer**: Why not?*
>
> ***Participant:** Because mgowe is what was practiced in ujamaa, and ujamaa failed due to disunity and lack of faithfulness.'*[243]

7.3.1.2. Divisions of labour within the household

Women, men, and children tend to work together on the farm. When I conducted participant observation during maize planting, for instance, the husband, wife, and son all worked together conducting the same tasks.[244] This is also the case in the vegetable *bustani*, where both men and women cultivate a diverse range of crops. After they have returned from the farm, however, it is the women who do all the cooking, cleaning, and looking after the children.[245] It is also usually the women's task to husk and prepare the maize after the harvest. This means that women often have a lot less leisure time than men, and many more tasks to complete in a given period. Sometimes the

[242] Interview with farmer 36, Kitelewasi, 22/09/2015. Interview with farmer 41, Kitelewasi, 22/09/2015. Interview with village chairman, Kitelewasi, 28/09/2015. Focus group with Cheetah Development farmers, Vitono, 02/10/2015. Interview with farmer 87, Kipaduka, 19/10/2015.

[243] Interview with village chairman, Vitono, 07/10/2015.

[244] Participant observation, Lusaula, 03/12/2015.

[245] Interview with village chairman, Vitono, 07/10/2015. Interview with farmer 98, Kipaduka, 20/10/2015. Focus group with farmers, Kitelewasi, 15/09/2015. Interview with farmer 26, Kitelewasi, 21/09/2016. Interview with village chairman, Kitelewasi, 28/09/2015. Interview with farmer 78, Vitono, 09/10/2015.

husband might help with fetching water and firewood, but it is traditionally a taboo for the husband to do other chores, especially preparing food. [246]

Some women and men mentioned that these gendered divisions of labour are being broken down, especially with the rise in female education 'opening people's minds', and the growth of women's entrepreneurial groups. [247] Organisations like the Bangladeshi NGO BRAC (Building Resources Across Communities) run women only training and finance schemes. Women take up leadership positions in local institutions like the church, village government, and schools, as well as working as agents and village leaders for external organisations. The female Cheetah village agent in Kipaduka, for example, also held positions in the church, the school, and in her women's village community bank group.[248] The taboo over gendered roles is, however, still upheld to a certain degree by both men and women in the community. One man said that he tried to help with the household chores, but his wife told him to stop, as it would reflect badly on her in the community as unable to care for her household by herself.[249]

Within the household, decisions over agriculture tend to be discussed by the husband and the wife, with the balance between the two varying:

> ***'Interviewer:*** *Are you the head of the household?*
> ***Participant:*** *No, I'm not the head of the household, there is the head of the household.*
> ***Interviewer:*** *So there's your husband who is the head of the household?*
> ***Participant:*** *Yes, my husband is the head of the household.*
> ***Interviewer:*** *Do you farm the same farm or different ones?*
> ***Participant:*** *Just the same farm, but it is my land and no one can tell me what to do with it!*
> ***Interviewer:*** *Was the Cheetah loan in your name?*
> ***Participant:*** *Yes, the loan was in my name.*
> ***Interviewer:*** *Why didn't your husband take the loan?*
> ***Participant:*** *When Cheetah came it categorised the loans into big farmers and small farmers, so I took the big loan and he took the small loan.* '[250]

[246] Interview with farmer 80, Vitono, 09/10/2015 and Interview with farmer 54, Vitono, 01/10/2015 – husband and wife.
[247] Interview with farmer 105, Kipaduka, 21/10/2015. Interview with farmer 104, Kipaduka, 21/10/2015. Interview with farmer 80, Vitono, 09/10/2015. Interview with farmer 52, Vitono, 25/07/2016. Interview with farmer 78, Vitono, 09/10/2015.
[248] Interview with farmer 90, Kipaduka, 15/08/2016.
[249] Interview with village chairman, Vitono, 07/10/2015.
[250] Interview with farmer 80, Vitono, 21/07/2016.

Understanding labour divisions within households in Lower Kilolo is complicated by the continuing practice of polygamy. Although declining in prevalence, there are cases of men having multiple wives. In these households, the second wife will commonly be the head of her own household with responsibility for day-to-day decision-making regarding her portion of the family land.

7.3.2. Socio-cultural relationships

7.3.2.1. Maize as food: the significance of *ugali*

Farmers in Lower Kilolo first and foremost grow maize for their own subsistence needs, and in this way maize is important both culturally and nutritionally. White maize is at the core of the diet in Lower Kilolo, and the characteristics of the crop have been shaped by farmer seed selection over hundreds of years. In comparison, yellow maize is unpopular for eating due to its colour and taste. This has caused problems in the past, when during times of famine and hardship yellow maize has been provided as food aid. The resulting association of yellow maize with times of hardship has increased its unpopularity. One farmer recounted that 'during the famine disaster in 1977 we asked help from the local government, and they brought the yellow maize flour. Even when you cooked *ugali* it appeared yellow in colour!'[251] This demonstrates that maize is closely tied to cultural identity and entrenched preferences, and is far more than just a commodity for exchange or purely a means of sustenance.

The maize cobs are harvested, husked, and threshed to produce maize flour that is mixed with hot milk or water to make *ugali*. Usually, *ugali* is made with the more nutritious wholemeal *dona* maize flour, rather than the highly refined *sembe* flour that is more popular in urban areas.[252] *Ugali* is typically eaten with *maharage* (beans), *mboga* (vegetables), and *nyama* (meat) when it is available. It is eaten daily, and often more than once. When I asked farmers why so many people grew maize, I was told that it was because people want to eat *ugali.*[253] In Iringa, *chakula* (food) is closely associated with *ugali*, and the sharing of *ugali* with visitors, friends, neighbours, and family is a crucial element of local culture. When arriving at a house in Lower Kilolo, it is common to be greeted with calls of *karibu chakula* (welcome for food), or apologies that the *ugali* is not yet ready. The ubiquity of *ugali* means that it is sometimes used to make tribal distinctions, both seriously and in jest, for example 'you eat *ugali* like a Hehe' (Ohna et al. 2012, p.9).

Although reliance solely on maize can lead to nutritional deficiencies, it makes important carbohydrate and protein contributions to rural diets. Maize contains more carbohydrate than wheat

[251] Interview with village chairman, Kitelewasi, 28/09/2015.
[252] Interview with Dr Anand Moro, Sembe Tofauti, Iringa, 05/11/2015.
[253] Focus Group, Lusaula, 19/08/2015.

(Triticum spp.) and sorghum *(Sorghum bicolor),* and is also a good source of phosphorous, as well as containing small amounts of calcium, iron, thiamine, and niacin (Mboya et al. 2011). A study in Mbeya Region, to the southwest of Iringa, found that maize forms between 66.8% and 69.5% of total energy, and between 83% and 90% of total protein in rural diets (Mboya et al. 2011). Dr Anand Moro, General Manager at Sembe Tofauti flourmill, stressed the importance of maize for *ugali* in rural diets, and the implications of this for attempts to foster maize processing and commercialisation:

> *'They [smallholder farmers] have absolutely no idea how to do it [process maize]. And more importantly, to hell with it, we want it for our own food. We make ugali and eat it. Why should I take so much trouble over it? That is what our people at the farms are saying right now.'*[254]

The amount of maize required varies depending on personal circumstances: one farmer needed ten bags of maize for his family of seven people for a year, while another required three sacks for himself, his wife, and an orphan they took in, plus one to send to his daughter's school.[255] Some farmers stated that due to their harvest size, or demands on their harvest, they usually had to buy in food by the end of the year, or make important decisions about how to prioritise uses for their harvest. One farmer stated that she usually prioritised selling maize to cover costs of sending her child to school, but this meant that it was often a 'squeeze' for her to feed her family for the whole year without having to buy in maize.[256] Farmers' ability to feed their families is highly dynamic and hard to measure, as it depends on the harvest yield (which depends on the weather), and changing demands within the household. 45% of the sample stated that they are usually able to feed their family for the year with their harvest. The ability of the rest to do this depends on the rains and household demands.

7.3.2.2. Maize and the church: relations of obligation

Despite its importance for household subsistence, maize is called upon in multiple and sometimes conflicting ways. Maize plays an important role in spiritual relations in Lower Kilolo, and farming and religion are intrinsically bound together. All four villages had followers from a range of religious groups. Vitono, for instance, is roughly split equally between those who follow an officially recognised religion, either Shafi'i Islam or Christianity, and those who do not.[257] Within Christianity, there are Roman Catholics, Seventh Day Adventists, Lutherans, and followers of the Tanzanian Assemblies of God. These religions may differ in their beliefs and customs, but they all require

[254] Interview with Dr Anand Moro, Sembe Tofauti, Iringa, 05/11/2015.
[255] Interview with farmer 99, Kipaduka, 15/08/2016. Interview with farmer 112, Vitono, 08/08/2016.
[256] Interview with farmer 68, Vitono, 06/10/2015.
[257] Interview with village chairman, Vitono, 16/07/2016.

followers *kutoa sadaka* (to make offerings), and invoke powerful attachments of meaning and responsibility to the things offered.

One of the most important offerings is given after the harvest. All religions require followers to give an offering of 10% of their harvest, for example if they harvest ten *gunia* of maize, they have to offer one, and if they harvest 100 *gunia* they have to give ten. While this offering in produce is common across all the religious groups, the degree of necessity and meaning attached to provision of the offering varies. A Lutheran priest clarified that 'if you have something you pay, if you don't then you do not'.[258] The situation is, however, quite different in the Tanzanian Assemblies of God. What sets this religion apart from the others is the extent of the fear surrounding non-payment of the *sadaka.* A woman in Lusaula provided an example of a farmer in a nearby village whose maize plants allegedly grew without maize cobs, which was attributed to the fact that he had not given an offering the year before.[259] A preacher in Vitono told me that if people do not pay they are 'cursed', and this 'curse' can take many forms:

> *'According to the Bible, one is obligated to give 10% of what is harvested. We preach it that way so that people would be aware that if God blessed them to harvest, they should give back so that they can get out of the curses and get the blessings. The curses can come in the form of diseases, getting disturbed by spirits, waking up tired all the time, failing to work hence continuing being poor, or sometimes working really hard but not getting anything because there are no blessings in the work done.'*[260]

In practice, offerings are used to pay for 'church business' such as hosting guests and buying supplies, but they play a parallel role in the lives of followers in the village. Offerings simultaneously represent paying back the everlasting debt of mankind to God, maintaining a relationship with the spiritual world, and asking for blessings. Material expressions of spiritual transactions are not simply one way. When someone gives an offering they expect something in return, for example bountiful harvests, health, or good fortune in education or business. Amongst Christians in Tanzania, this expectation of a material return from offerings has gained traction with the spread of the Faith Gospel and 'prosperity churches'. The Faith Gospel states that every born-again Christian has the right to receive divine blessings of wealth and health, but also has a duty to give offerings to the church (Lindhardt 2009; Dilger 2007). While something tangible is expected in return for the offering, its exact form and timing is less certain. In the case of religious offerings, the value of maize is in its ability, through *kuweka maombi* (placing prayers), to form a tangible bridge to the transcendental world as a vehicle

[258] Interview with Lutheran representative, Vitono, 19/07/2016.
[259] Interview with farmer 6, Lusaula, 14/09/2015.
[260] Inteview with Tanzanian Assemblies of God representative, Vitono, 19/07/2016.

for hopes and fears to sustain crucial religious relationships that, for many, provide a roadmap for rural life.

7.3.3. Socio-economic relationships

7.3.3.1. Spending and saving

A common trope is that smallholder farmers lack an ethic of saving and investing, or do not possess the financial management skills to do so. This is highlighted in Chapter 6 in relation to the Cheetah model, and is reiterated by other actors in the Tanzanian agricultural sector:

> *'I have hardly heard of anyone saving money. The concept of saving is lacking here, saving for a rainy day.'*[261]

> *'You have got to remember that an African mind is always working on an easy option. Given an easy option he doesn't think about tomorrow, it is about now. He is not really investing. They won't believe a word another one says, so how do they gain someone's confidence when they are not going to see their money because someone has said if you store it for x amount of months you will get this. They would rather have a bird in the hand is worth more than two in the bush.'*[262]

It may be true that for some sectors of the rural population saving is a luxury they cannot afford due to the pressure of demands on their capital as soon as it comes in, for example buying food and agricultural inputs.[263] In many cases farmers do save, but not in ways that are easily recognisable through the lens of the traditional financial system. People reported that if they have cash savings they receive demands from others in the village for help, and cash lying around is often perceived as wasted capital. When people have cash, therefore, they tend to invest it in tangible assets, such as buildings, livestock, or equipment. These tangible manifestations of capital serve to both keep it safe, and put it to good use in promoting individual development. Investing in tangible forms is also supported by Shari'ah law, which promotes investing capital in *miradi* (projects) rather than hoarding 'idle' money (Ahmad & Hassan 2004). From this perspective, money itself is of little value, and storing it is wasteful. Its value lies in being translated into assets and services. This contrasts with the mainstream capitalist perspective that money is a commodity of exchange that can be bought, sold, accumulated, and speculated on (Ahmad & Hassan 2004; Graeber 2014).

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[261] Interview with Dr Anand Moro, General Manager, Sembe Tofauti, Iringa, 05/11/2015.
[262] Interview with Otto Ulyate, Farm Manager, Rutuba Farm, 01/12/2015.
[263] Interview with farmer 26, Kitelewasi 21/09/2015. Interview with farmer 22, Kitelewasi, 21/09/2015. Interview with farmer 4, Lusaula, 14/09/2015. And more.

Locking up capital in tangible forms also makes sense in the context of the general challenges of rural life. Some maize is often saved after the harvest as a means of budgeting for future expenditure. This includes selecting maize seeds for planting, and selling some to obtain money for renting labour, land, and equipment, as well as buying other inputs like fertiliser and hybrid seed. Families with school age children tend to prioritise selling maize to cover the cost of *ada* (school fees, including costs of uniform and equipment). Furthermore, parents with children away at boarding school are required to send maize to the school as a contribution for their child's food for the year. Finally, farmers often keep an amount of maize as savings in the case of unforeseen events, investments, and emergencies during the year, or simply to wait until the market price improves:

> *'First I put some for food and give offerings to the church. Then I sell some amount of maize to pay school fees, and the remaining is for savings.'*[264]

> *'This season I got 15 sacks of maize. 2 sacks of maize are for church offerings and the rest I keep for saving… but also I give some of the maize for my son's food in school.'*[265]

Investing capital in cows is also common. As described earlier, cows can provide alternative income sources through milk, manure, and through renting them out. They can also ultimately be sold or killed for meat if a large injection of capital or food is needed. An elderly lady in Kipaduka said that investing capital in cows is a good, and sometimes the only, form of insurance available in old age as 'it's better if you have the money to look if you can buy some livestock. If I invest in livestock and I happen to get the problems, I can easily sell them to revive myself.'[266] Furthermore, in times of hardship, for instance a bad harvest, most are affected and so are unable to support others:

> ***'Interviewer:*** *Did you ask for help from other people?*
> ***Participant****: No. If you ask everyone complains that it is a hard situation and the drought is for everybody.'*[267]

While some said that they helped out relatives and neighbours with capital, food, and labour in times of unforeseen hardship such as a death or illness in the family, there does not seem to be a social support system in the case of repaying individual loans, which are seen as personal burdens and a matter of choice:

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[264] Interview with farmer 99, Kipaduka, 15/08/2016.
[265] Interview with farmer 90, Kipaduka, 15/08/2016.
[266] Interview with farmer 110, Vitono, 08/08/2016.
[267] Interview with farmer 109, Vitono, 21/07/2016.

'Interviewer: *Do people in the village help each other to pay loans?*

Participant: *Ah…no. First they will just laugh at you because they'll say "you took the loan yourself so why should I help you with paying?" You just need to work hard on your own. Even if you try to go explain yourself people will laugh at you.*

Interviewer: *Why is this?*

Participant: *Because most people are tight-fisted.*

Interviewer: *Do you think this has changed from the past to now?*

Participant*: Not really, people still have the selfishness.'* [268]

Tangible forms of risk management are therefore important for rural livelihoods in the context of limited village-based socialised insurance for what is seen to be private risk.

7.3.3.2. Borrowing and lending in Lower Kilolo

Rural people often have plenty of their own debts even before foreign actors arrive with new loan schemes. It is therefore important to investigate how farmers construct and maintain pre-existing borrowing and lending relationships. Understanding flows of capital between Kiswahili speaking people, however, presents a linguistic challenge as the commonly used words for 'to borrow', *kukopa*, and 'to lend', *kukopesha*, are often used interchangeably. For example, someone might say 'I borrowed him money', which does not make it clear who is doing the borrowing and who is doing the lending. This is in comparison to English, in which borrowing and lending are two very different concepts with very different connotations. There is also another word, *kuazima*, which can mean 'to borrow' or 'to lend'. Johnson & Krijenburg (2014) found that in the Kikamba language of the Kitui area of Kenya there are different words for different types of lending and borrowing relationships, for example those based on 'give and return' and those based on 'ask and assist'. I wondered if Kiswahili was similar, but discussions with my research assistant and villagers suggest that *kuazima* and *kukopa/kukopesha* have the same meaning and usage, but the latter is more common. In the interviews, I used hand gestures to make it clear whether I was referring to lending or borrowing.

Two main types of borrowing and lending can be identified within Lower Kilolo. The first involves people who take up money lending as a form of small business. In Vitono, there are a few people who lend money in this way, and a lot of people wanting to borrow from them.[269] This forms another demonstration of farmer entrepreneurship. Borrowers are typically in need of capital for a variety of

[268] Interview with farmer 50, Vitono, 25/07/2016.
[269] Interview with village chairman, Vitono, 16/07/2016.

reasons that include buying medicine in the case of sickness, covering school fees, purchasing agricultural inputs, making larger investments, or obtaining food in times of hardship:

> *'It gets to the point where we as the farmers fail to move on, so you go to the person and lends you a hundred thousand."*[270]

> *'It happens that the farmer has no capital to start farming, because it is expensive to farm these days with all the inputs and fertilisers. Also someone might need to expand their farm so they borrow money."*[271]

The more formal lenders in the village tend to be those with surplus capital who are often able to access other income sources, such as teaching, owning a shop, or accessing capital through a microfinance loan. As one farmer stated, 'it's one of the activities I do. I take the loans from monetary institutions and then I come and give loans in order to get some profit out of it in the form of interests, and the profit is used in paying back Cheetah and for my own development'.[272]

Some of these moneylenders require *dhamana* (collateral) on the loans. This collateral is never the size of a house or a farm, but could be a bicycle or goat. Other loans do not have *dhamana* in kind, but instead the borrower has a referee who vouches for his/her trustworthiness, and must take up the burden of the loan if the borrower defaults. The loans commonly take the form of cash lent in the dry season to be paid back in produce after the harvest. They often have high *riba* (interest). For instance, one farmer lent another TSh 20,000 (USD 8.98)[273], and he had to pay her back a bag of sunflower after the harvest that was worth TSh 50,000 (USD 22.45)[274], meaning an interest payment of 60%.[275] This high interest means that farmers often see this kind of borrowing as a last resort 'because you may find even when someone wants to give you a loan, they'd ask for 50% interest. Therefore there's no help there, it's just pulling you backwards.'[276]

On the other hand, there is a lot of reciprocal borrowing between friends, family, and neighbours, especially during periods of high expenditure such as planting and weeding. These loans are often rotating over time, with borrowers becoming lenders, and lenders becoming borrowers. One farmer explained that rather than viewing moneylending as a means to make a profit, she saw it as a form of

[270] Interview with farmer 110, Vitono, 08/08/2016.
[271] Interview with village chairman, Vitono, 16/07/2016.
[272] Interview with farmer 59, Vitono, 21/07/2016.
[273] Conversion rate USD1 : TSh 2226.97, 16/01/2017.
[274] Conversion rate USD1 : TSh 2226.97, 16/01/2017.
[275] Interview with village chairman, Vitono, 16/07/2016.
[276] Interview with farmer 55, Vitono, 21/07/2016.

investment for safekeeping: 'we give loans as helping each other… I take the matter of giving a loan as saving the money somewhere and collecting it in time.'[277]

These loans do not tend to have *riba*, and instead of formal *dhamana* the lenders look to the condition of the potential borrower's farm and their personal knowledge of her/his trustworthiness and ability to repay:

> *'Well it's from my friend so there is no interest. They trust me, and sometimes when they're in need I help them too.'*[278]

> *'I don't have any conditions because I give to people I know, and you may find someone has a sick person so I just lend them money out of humanity. It depends with the person, but mostly I don't put collaterals because it is just out of humanity.'*[279]

Understanding these flows of capital between farmers within the village raises a number of key points in relation to the farmers' moral economy. It demonstrates that collateral and interest are not new concepts for farmers. The English terms have well-defined translations in Kiswahili (*dhamana* and *riba*), and they are used in certain types of lending and borrowing within the village. The use of collateral guarantees, be it intangible, or even small tangible possessions like a chicken, goat or even a bicycle, are also generally seen as favourable as they encourage repayment on time and provide some sort of security when the lender is less well-known to the borrower:

> *'When someone is asking for the loan and has the guaranties or comes with the referee then it's more likely he's going to pay back the loan to avoid confiscation, hence less disturbance.'*[280]

> *'They [tangible collaterals] are good because if the person fails to pay back in time, then they can be confiscated to pay back the loan.'*[281]

> *'Collaterals are just normal things, because you don't expect to get money without putting something.'*[282]

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277 Interview with farmer 87, Kipaduka, 16/08/2016.
278 Interview with farmer 110, Vitono, 08/08/2016.
279 Interview with farmer 51, Vitono, 25/07/2016.
280 Interview with farmer 110, Vitono, 08/08/2016.
281 Interview with farmer 87, Kipaduka, 16/08/2016.
282 Interview with farmer 116, Vitono, 08/08/2016.

Time is also of central importance, and particularly a degree of temporal flexibility in loan repayment based on an understanding of the agricultural conditions and the challenges that they represent:

> *'If it has been bad times then people will be a little bit stubborn, but normally pay back when they get the money. For life to go on people have to help each other. Since we only lend money to people we really know, we tend to understand the situation if it's really bad and just be patient about it until they're able to pay back.'* [283]

While being interviewed, the Vitono village chairman was contacted by someone who owed him money. The indebted farmer asked if he could delay repayment as his sunflower harvest was smaller than expected.[284] The chairman agreed to extend the deadline to the following harvest as he understood that the harvest had been small.

As well as temporal flexibility, there is often also material flexibility in farmer-farmer loans. Repayment is sometimes accepted in a different form to the original agreement, for example in a different crop or in labour: 'another option is taking the loan and paying it back by working for the person'.[285]

Flexibility in repayment temporalities and materialities is possible due to the centrality of trust in the giving and receiving of loans between farmers: 'we just don't give loans to strangers.'[286]. This supports Shipton's (2010) assessment that loans are neither neutral nor only short term, but they are usually morally charged and enduring interpersonal relationships. Trust is also an intangible form of collateral, as the risk of losing trust—and therefore the risk of losing the chance of future loans—encourages repayment:

> *'It happens there was an agreement but the paying is delayed so I feel bad… especially if you trusted each other then you cannot sue them. It happens you had something to do with the money leading to your plans failing also.'*[287]

> *'There are different terms, but there are things you have to look at before giving the loan such as the amount of activities the person is doing, also trust among each other, habits, and to see if the person is the hard worker. So it is not about tangible things, but it is about honesty.'*[288]

[283] Interview with farmer 59, Vitono, 21/07/2016.
[284] Interview with village chairman, Vitono, 16/07/2016.
[285] Interview with farmer 86, Kipaduka, 25/07/2016.
[286] Interview with farmer 59, Vitono, 21/07/2016.
[287] Interview with farmer 110, Vitono, 08/08/2016.

When asked what happens when people cannot pay them back, farmers said that they tend to only lend money to people within the village that they know and trust, and so they can be confident that they will pay them back. One farmer told me that he lost money when a friend was unable to pay him back, but that he did not mind as he expected to borrow money from that person in the future.[289] If there are no mitigating circumstances that explain why a borrower cannot repay, the lender faces a range of options: they can simply take the loss, demand some kind of collateral in possessions or labour, or they can pursue repayment further with the village government. The last resort is to take the debtor to court in order to officially confiscate collateral or enforce repayment:

> *'Someone can just confiscate your money and if you go and sue this person it means more money expenditure so it's just not worth it.'*[290]

> *'It depends with what the person's situation is. Sometimes a person is in a reasonable problem and it is worth waiting, but if someone had the money mismanagement, then further steps can be taken such as involving other villagers or even suing the person.'*[291]

> *'If I see I am failing to pay, I go to the person I owe money and ask for forgiveness. Other people take each other to the government and confiscate the properties.'* [292]

As these quotes demonstrate, however, court costs often outweigh the benefits of receiving repayment and so is not a popular route. Instead, disputes tend to be negotiated within the village.

7.4. Summary

The livelihoods of farmers in Lower Kilolo involve, to a greater or lesser extent, complex portfolios of different income sources that include *biashara ndogo* (small business), *kazi* (formal employment), seasonal labour, money-lending, and renting out agricultural equipment. Farming, however, forms the backbone of local livelihoods. Local agro-ecological conditions mean that a range of crops are cultivated, and these can be split into those grown in the *shamba,* and those grown in the *bustani*. Through cultivation practices and diversification into other income opportunities, farmers demonstrate entrepreneurial and innovative capabilities, for example by renting out cows to work on

[288] Interview with farmer 87, Kipaduka, 16/08/2016.
[289] Interview with farmer 89, Kipaduka, 15/08/2016.
[290] Interview with farmer 110, Vitono, 08/08/2016.
[291] Interview with farmer 87, Vitono, 16/08/2016.
[292] Interview with farmer 86, Kipaduka, 25/07/2016.

the fields of others, and experimenting with different types of fertiliser. Agricultural practices are conducted through divisions of labour at both the village and household level, but these are dynamic and adapt over time as can be seen in the waning practice of *mgowe* and rise of wage labour, as well as the changing role of women. Land tenure in Iringa is also undergoing changes. While the majority of farm ownership is based on customary tenure, there have been efforts to expand private land title through the work of organisations like Haki Ardhi, as well as the drawing up of village land use plans.

Although it is common for farmers to cultivate more than one crop and draw income from other sources, maize is at the heart of life in Lower Kilolo. Despite maize farming practices undergoing important recent changes, for example the introduction of the *kamba* method and only planting one seed in each hole, farmers demonstrate subsistence-orientated risk-minimisation techniques through partial engagement in input and output markets. Maize is the most important crop in Lower Kilolo as it is assembled in a variety of overlapping and sometimes contradictory spheres of value, for example maize as food in the form of *ugali,* as an offering to the church, as a budgeting tool, and as a cash crop. Despite the ubiquity of this crop, the people who farm it are far from homogenous, and differences can be found in terms of land size, ownership and use of productive tools, other income sources, and extent of commercial production.

To support their livelihoods, farmers engage in webs of socio-economic relations that include borrowing and lending and spending and saving. The resulting moral economy has temporalities and materialities that are adapted to the demands of the local environmental and socio-economic context. In terms of borrowing and lending, this includes temporal flexibility in loan repayment timeframes, and material flexibility through repayment in cash, in different crops, or in labour.

This chapter demonstrates that smallholder farmers possess moral economic norms, values, and practices that pre-exist—and lie in parallel—to those imposed by the prescriptive and disciplinary Cheetah model. The next chapter explores the clashes that resulted from the interaction between farmer livelihoods and moral economies, and the form of ethical capitalism imposed through the Cheetah model.

8. What happens when the Cheetah model meets farmer livelihoods?

8.1. Introduction

Cheetah's conceptualisation of the problem of, and solution to, agricultural development in Iringa was drawn up in boardrooms in the US far from the lived realities of the central actors: the farmers. This chapter deals with the clashes that arise when the abstract and idealised assemblage constructed by Cheetah meets the complex realities of farmer livelihoods in Lower Kilolo.

In 2015, Cheetah field teams visited villages to collect maize loan repayments, but found that many farmers failed to repay by the deadline. By July 2016, around 15% of farmers in Vitono had still not fully repaid their loan from the 2014–2015 harvest season.[293] The large number of farmers defaulting on their loan repayments led Marco Johnson, Cheetah Vice-President Field Operations, to brand some villages as 'clusterfucks'.[294] The number of defaulting farmers undermined the sustainability of the Cheetah programme, contributed to Cheetah's challenges in finding a lending partner, and resulted in no input loans being distributed in 2015–2016.

While there may be a proportion of defaulting farmers who simply refused to repay despite being able to, evidence suggests that the picture is more complicated than simply wilful disobedience. The programme collapsed in 2015 due to three interlinked issues: environmental disruptions, poor implementation by Cheetah staff, and multiple cases of inflexibility embedded in the model. The resulting clashes and instances of farmer resistance are not simply related to the repayment of debt; they represent clashes over the compatibility of financial models and agricultural livelihoods, and what are considered to be ethical socio-economic relationships under conditions of environmental disruption.

This chapter firstly examines the environmental disruptions in 2014–2015 relating to intermittent rainfall and a rat infestation, which exposed tensions between Cheetah and participating farmers. Secondly, I discuss the clashes that undermined the relationship between Cheetah and its participating farmers in the context of the poor harvest of 2014–2015. These clashes can be grouped into issues of

[293] Interview with village chairman, Vitono, 16/07/2016. For confidentiality reasons, Cheetah was unable to provide me with the exact figures or names of defaulting farmers. This figure was relayed to me by the village chairman in Vitono based on his knowledge of Cheetah participation.

[294] Interview with Marco Johnson, Cheetah Development Vice-President Field Operations and President Pearl Foods, Iringa, 25/09/2015. The dictionary definition of a 'clusterfuck' is, ironically, a disastrously mishandled situation or undertaking.

implementation and issues embedded in the model itself. Cheetah attempted to discipline farmers into adhering to a particular valuation and use for their maize crop—that of production for commercial sale—and enforced a rigid conception of the temporality and materiality of loans in the context of increasingly multi-faced and distanced socio-economic relationships. Cheetah subsequently failed to balance social and financial impacts, and imposed socio-economic relations that were experienced by smallholder farmers as violations to their moral economic principles.

8.2. Environmental disruptions

In general, farmers deemed the early years (2012–2014) of Cheetah participation to be a success, and this period corresponds with reports of plentiful and reliable rainfall. This is in contrast to the 2014–2015 season, in which farmers experienced rainfall that was slightly lower than in previous years, and more importantly intermittent. This occurred alongside an associated rat infestation in some villages, both of which contributed to small harvest sizes. In parallel, in 2014–2015 farmers faced multiple challenges in negotiating their relationship with Cheetah:

> *'When they first came [2013–2014] they wanted us, the farmers, to sell them our crops. We did so and in exchange they brought us the agricultural inputs. We used them very well and it was a good season with lots of rains.'*[295]

> *'The first year [2013–2014] we had a good experience with Cheetah because they gave us loans and we harvested well, but since the next year the harvests were not good and we couldn't pay back the loans so our experience was not that good.'*[296]

Using rainfall data recorded at Kibebe Farm, a commercial dairy farm in Kilolo District, it is possible to piece together rainfall trends from 1988 to 2015 (see Figure 8.1).[297] These data can be used to substantiate farmer rainfall reports. For synchronisation with the agricultural season the years are calculated from July to June. While these data will not be directly representative of the village research sites as the weather in Iringa is highly localised due to the inselbergs, it does provide an indication of trends over time.

[295] Interview with farmer 80, Vitono, 21/07/2016.
[296] Interview with farmer 59, Vitono, 21/07/2016.
[297] Interview with Richard Phillips, Kibebe Farm, 04/08/2016. From 1988 rainfall was measured and recorded daily.

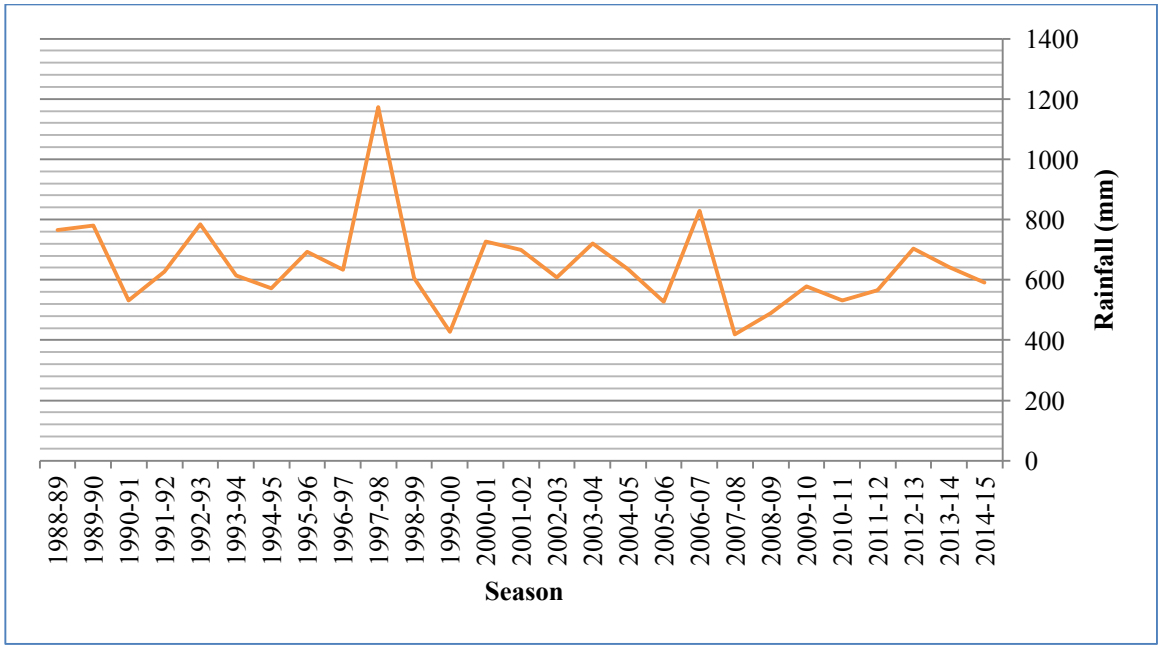

Figure 8.1 Seasonal rainfall data at Kibebe Farm, Iringa Region, 1988–2015.

The data in Figure 8.1 supports farmers' reports that the first couple of years of participation in the Cheetah programme (2012–2014) were years of plentiful rainfall. 2012–2013 in particular was a year of heavy rainfall with 703mm, while there was 643mm in 2013–2014. These two years may also stand out in farmers' memories as years of good rainfall as they came after a period of very low rainfall from 2007 to 2011. During these years, the average was only 516mm with a low of 419mm in 2007–2008. In 2014–2015 Kibebe Farm received 590mm of rainfall. This is below the average for the 27 years, but it is not the lowest on record. The previous two years of good rains, however, may partly explain why this year stands out as one of particularly poor weather in recent memory. One farmer explained that: 'there has not been enough rain. In the last three years the weather has been very changeable. The year before last the maize was good, but last year there was little rain so the maize grew short.'[298]

More important than the slightly lower overall volume of rainfall in 2014–2015 was the onset and variable intensity of the rainfall. This year was one of only seven since 1988 when rainfall began in October rather than November or December, meaning that farmers were less prepared than usual for planting. Cheetah, for example, had not yet delivered inputs to its participating farmers. In January and February of 2015, the rainfall intensity decreased and there was a dry hot period resulting in crop stunting. Over the 27–year period, the mean rainfall in January was 135mm, but in 2015 it was only 73mm:

[298] Focus group, Mjiwema, 18/08/2015.

'After it started raining we planted the crops and then they germinated. After germination, there was a period of intense sunshine, like one month, then it started raining again very heavily for a short time, but by this time the crops were already destroyed. So, it didn't help anything at all with the crops we planted first.'[299]

While the vegetable *bustani* in Kitelewasi and fields in the valley-bottom in other villages were irrigated using *vinyunga* techniques (channels that collect rain and river water and distribute it among the plots), none of the farmers in the sample villages systematically irrigated their crop *shamba*. Although there are hand pumps in Vitono and Kipaduka, the pressure is weak apart from during the height of the rainy season and so they cannot currently be used for irrigation.[300] Instead, on the slopes crops are planted on ridges to trap water and prevent it from running straight off downhill (see Figure 8.2).

Figure 8.2 Ridges to prevent rainwater run-off in Lusaula, 2015.

[299] Interview with farmer 80, Vitono, 21/07/2016.
[300] Interview with farmer 50, Vitono, 01/10/2015.

In Uhambingeto Ward (which includes the villages of Vitono and Kipaduka) the low rainfall in the 2014–2015 season had another unfortunate and unexpected consequence that devastated the harvest: a rat infestation. Farmers in Vitono and Kipaduka reported that:

> *'people used the inputs and planted the crops, but there were rats who ate the plants and the sun was so intense leading to us not getting any crops.'*[301]

> *'this year there was the problem of rats which resulted in the controversy between the Cheetah farmers and Cheetah company.'*[302]

> *'rats have been a very big problem. They are the ones who brought a big problem even with Cheetah. The rats were too many that they were uncontrollable.'*[303]

Rats (*Mastomys natalensis*) are significant pests for cereal farming in Tanzania, and they are notoriously difficult to manage due to their capacity to adapt (Makundi et al. 2006; Makundi et al. 2006; Leirs et al. 1996; Leirs et al. 1990). Research has shown that rat populations in East Africa tend to oscillate in tandem with rainfall, with higher rainfall boosting the rats' food supply of seeds, foliage, roots, and insects, leading to higher breeding rates and population explosions (Leirs et al. 1990; Massawe et al. 2011). This is interesting in the context of Uhambingeto Ward, where farmers reported a rat infestation in a year of lower than average rainfall. The clue to understanding this is in the reports that the rats would 'come down from the hills' into the farms.[304] This suggests that the infestation was more likely due to a rat population that had been steadily expanding during years of abundant rainfall, but faced limited food supplies on the hills in 2014–2015 due to lower and intermittent rainfall. This meant that they were forced to come down the slopes into the farms to find food. The low rainfall also minimised the effectiveness of the local rat control technique of digging holes in the fields that would fill up with water and drown the rats as they tried to enter the farms.[305]

It was against this backdrop of environmental disruptions and low harvests that Cheetah began to collect loan repayments in the summer of 2015. While the lower rainfall and rat infestation do not explain why the programme collapsed in 2015, they suggest why clashes were revealed in this year in comparison to the previous years in which farmers reported that the weather had been favourable.

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[301] Interview with farmer 51, Vitono, 25/07/2016.
[302] Interview with village chairman, Vitono, 07/10/2015.
[303] Interview with farmer 90, Kipaduka, 15/08/2016.
[304] Focus Group with Cheetah Development Farmers, Vitono, 02/10/2015. Interview with farmer 81, Vitono 09/10/2015. Interview with farmer 50, Vitono, 01/10/2015.
[305] Focus group with Cheetah Development Farmers, Vitono, 02/10/2015. Interview with village chairman, Vitono, 07/10/2015.

Environmental disruptions exposed the problem of poor implementation, as well as rigidity and distancing embedded in the Cheetah model and how this clashed with culturally, ecologically, socially, and economically flexible livelihoods in Lower Kilolo.

8.3. Issues of Implementation

Some of the tensions that emerged in the 2014–2015 season were due to issues of implementation and poor management by the Cheetah staff, and were therefore avoidable. Issues of implementation meant that the relationship between Cheetah and participating farmers broke down, leading to a loss of trust and complications in the operationalisation of the model. This suggests that although much of the blame for loan defaulting is often placed on the borrower, it is also important to examine the actions and logics of the lender.

As discussed in the previous chapter, most farmer-to-farmer lending and borrowing in Lower Kilolo occurs between people who live in close social and physical proximity to each other. While some lenders do ask for tangible collateral, emphasis is often placed on intangible guarantees, and especially on trust. Cheetah recognises that to entrench accountability and sustain assembled actors they need to establish relationships with participating farmers. A major way that they attempt to do this is through meetings. Cheetah tries to keep the number of meetings that farmers have to attend to a minimum to avoid taking up too much of their time, but they perform an important role in negotiating interactions and building relationships between Cheetah staff and farmers. During October and November of 2015, I conducted participant observation with Cheetah field staff on four visits to villages in the Kilolo District of Iringa Region, and two in Njombe Region.[306] These visits each began with a meeting of participating and interested farmers. During these meetings, Cheetah field staff sat with the farmers, talked through the state of the programme, and gave them an opportunity to ask questions, raise concerns, and make suggestions. The Cheetah field staff wrote notes to discuss with the rest of the team back in the Iringa office. Often the meetings would end with a chant of the village name, for example 'Igodivaha—HEY, Igodivaha—HEY'. Through these meetings, Cheetah attempts to build relationships that make borrowers feel accountable to pay back their loans to the lenders, and the lenders to be responsive to the needs of the borrowers.[307]

[306] Participant observation with Cheetah Development field teams: Mwatasi, 23/10/2015; Irole and Vitono, 27/10/2015; Kipaduka and Itungi, 31/10/2015; Njombe 10/11/2015-13/11/2015.
[307] Interview with Joy Hazucha, Cheetah Development Senior Vice-President People, Culture, and Growth, Iringa, 08/08/2016.

In the 2014–2015 season, however, the relationships between Cheetah and participating farmers were fundamentally weakened by allegations of corruption and bad management, meaning that the assemblage of the Cheetah programme began to fall apart and lose its durability. In 2014, Tanzanian Cheetah field staff were accused of stealing from the farmers by selling on the quality inputs and replacing them with fake or expired seed and fertiliser in order to make a personal profit.[308] Staff members were also accused of writing the wrong loan amounts on farmers' receipts—either purposefully or through incompetence—leading to confusion about how much farmers needed to pay back in 2015. According to a farmer in Vitono, 'something which showed Cheetah's bad management was you might find a farmer is supposed to pay TSh 400,000, but it is written that he/she is supposed to pay TSh 900,000! They deducted money from some farmers and added it to others.'[309]

Against the backdrop of these allegations of corruption, in the Cheetah office in Iringa town relationships fell apart between the American and Tanzanian staff members, with rumours of conspiracies and poisoning of the communal food. In the spring of 2015 the American staff left, and all but one of the Tanzanian staff were replaced. This did not go unnoticed by participating farmers: 'the Cheetah administration system really wasn't good. Therefore, due to bad management it got to the point where all of them were changed from their offices.'[310] This wholesale personnel replacement led to inconsistencies in the Cheetah field teams and undermined the personal relationships established between Cheetah staff and the farmers. This is important as, according to Schnurr (2016, p.2), the most effective approach to answering 'the question of how to help the poor begins with their voices: listening to farmers, learning what they consider to be the major impediments to production and devising interventions that respond to those needs'. In Vitono, farmers felt that they had built a good working relationship with a Tanzanian staff member called Ben who they felt they could contact if they had problems. However, after the new field teams were brought in—consisting mainly of interns from the local university—the village visits always seemed to be conducted by different people, and farmers were finding it hard to build relationships and maintain trust in the organisation:

> *'I don't feel good about it. They [Cheetah] owe me money and they made me think of them as hooligans, but I think all they lack is good management. The previous guy, Ben, he could run the organisation really well, but after he left everything got bad as we didn't get our loans in time or the profit money. We even had to go to town to follow up about the money.'*[311]

[308] Interview with Marco Johnson, Cheetah Development Vice-President Field Operations and President of Pearl Foods, Iringa, 12/09/2015.
[309] Interview with farmer 80, Vitono, 21/07/2016.
[310] Interview with farmer 80, Vitono, 21/07/2016.
[311] Interview with farmer 52, Vitono, 25/07/2016.

As demonstrated in the below quotes, poor communication was especially important in the context of the bad weather in 2014–2015, as farmers felt that the new field teams did not appreciate the extent of the challenges they were facing in repaying their loans in maize. Cheetah rigidly enforced repayment despite the hardship that it was creating for some, and did not explore alternative pathways to repayment that may have been pursued in farmer-to-farmer loans under the same circumstances:

> *'Another problem with Cheetah is that they change their workers a lot, which makes us suspicious even with paying the loans because you don't know if the money is falling in right or wrong hands. Who came to give us the loans is someone else, who came to evaluate the farm progress is someone else, and who came to collect the loans is also someone else! And the guys never understand the real situation about bad harvests and all they want is their loan back.'*[312]

> *'The problem is they [Cheetah] were not serious, and the leaders didn't come to check out the farms in time and so they didn't know about the weather. When they came you were required to pay interest because you're late, so we ended up paying the debt twice.'*[313]

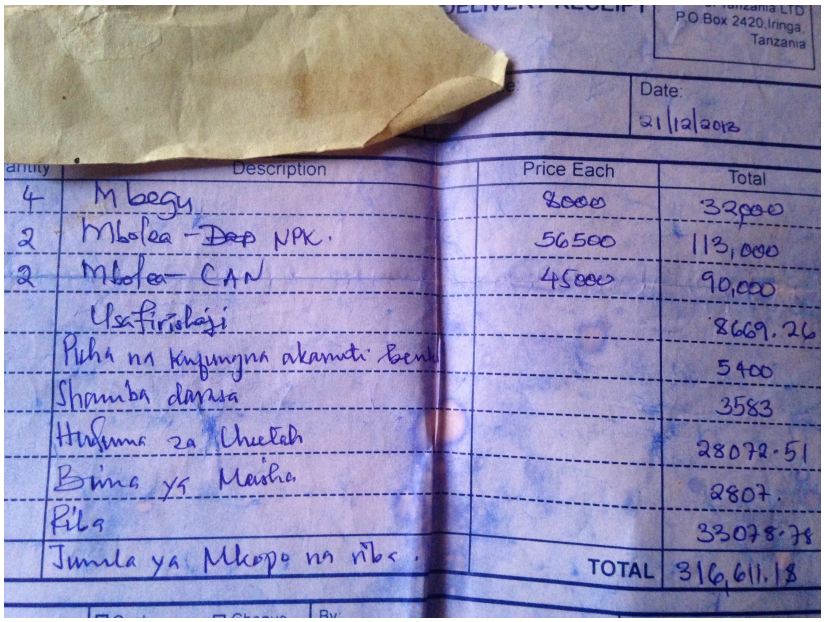

Figure 8.3 A farmer's receipt from Cheetah, 2015.

The environmental disruptions of 2014–2015 also exposed confusion over some aspects of the contract between Cheetah and the farmers. Figure 8.3 provides an example of a receipt given to a farmer by Cheetah, showing the complexity of the costs. From top to bottom the costs read: seeds,

[312] Interview with farmer 59, Vitono, 21/07/2016.
[313] Interview with farmer 115, Vitono, 08/08/2016

fertiliser, transportation, picture and bank account, demonstration farm, Cheetah services, life insurance, interest, total of loan and interest. The Cheetah contract stated that the organisation would cultivate demonstration farms to monitor the impact of weather on the harvest and the quality of the inputs they provided. This was intended to be free. In fact, the farmers were charged for these demonstration farms (*shamba darasa* on Figure 8.3), but they were never planted.[314] Similarly, the Cheetah contract stipulated that the farmer groups would be registered as either limited companies or cooperatives, but many groups were not despite the farmers having paid the TSh 10,000 fee (USD 4.47[315]).[316] The contract also stated that participating farmers would be provided with insurance for a small fee. The farmers were led to believe that this was crop insurance to cover their loans in the case of bad weather, but when they attempted to pursue this after the bad weather of 2014–2015, it emerged that it was actually death insurance to protect the lender. The following quotes demonstrate that as well as undermining trust in Cheetah, the controversy over crop insurance was particularly devastating for the farmers who—as discussed in Chapter 7—are typically highly risk-averse:

> *'Our village depends on agriculture so Cheetah is the economical solution, but with the loans you might be in contract with some organisation and then later on they change the contracts. For example, with Cheetah they asked us to pay the insurance in case of drought, but at the end the insurance doesn't cover weather leading to people failing to sustain themselves, which led to them selling even their livestock, hence bankruptcy. Therefore, we feel like we are being pulled behind and not moving forward.'*[317]

> *'It is not good when they lie about loan conditions and ask us to pay for insurance, but if things go wrong they take us to the court for obvious things such as lack of rains all over the region. When they are asking for loans they don't follow the conditions in the contract, even the advantages of insurance for funerals, disasters, or drought. Lots of people do not believe in this. I was taken to court due to not paying the loans because of the disasters we had with the harvest. Even though we paid for the insurance, the court didn't listen to us and favoured Cheetah.'*[318]

[314] Interview with Eliza Post, Cheetah Development field officer, Iringa, 27/10/2015.
[315] Conversion rate USD 1 : TSh 2234.99, 30/01/2017.
[316] Interview with farmer 50, Vitono, 01/10/2015.
[317] Interview with farmer 112, Vitono, 08/08/2016.
[318] Interview with farmer 109, Vitono, 21/07/2016.

Cheetah does not provide any crop insurance as they say it is currently uneconomical for them to do so.[319] According to Brad Brown, Cheetah Development Senior Vice-President, it would be very difficult for Cheetah to provide crop insurance because all the farmers participating in the Cheetah program are currently situated in Kilolo District. This means that if there is bad weather many participating farmers are likely to be affected at the same time, leading to high costs and liquidity issues for the organisation. Brown explained this as 'no one is going to go into it, not yet. Step one is to get these farmer groups creditworthy, and with a little more financial power behind them. Then insurers will start to feel more comfortable about doing that. Right now, we just eat the risk.'[320] The key question is where that burden of risk lies between Cheetah and participating farmers.

A further issue that arose in 2014–2015 is that of poor timing. According to Otto Ulyate, Farm Manager at Rutuba Farm, 'farming is not rocket science, it is way more complicated and there is so much to get right'.[321] A central element of this complexity relates to timing, as successful agriculture is temporally precise. It is estimated that for every week that planting is delayed beyond the optimum time the farmer will lose 10% of the harvest yield.[322] In 2014–2015, Cheetah did not provide maize seeds until mid-December, and in some villages not until January.[323] This meant that farmers planted these seeds late, which may have exacerbated the negative impact of the bad weather and rats on the harvest yield. Due to concerns for their harvest because of this delay, some farmers planted a greater acreage of *kienyeji* seeds or replanted hybrid seeds, often without using fertiliser, leading to lower yields.[324] Cheetah farmers reported that they experienced a great deal of uncertainty and anxiety surrounding input delivery, especially as they had to watch while One Acre Fund (1AF), another agricultural development organisation, delivered inputs to their participating farmers well in advance of the planting period. The late delivery of inputs also disproportionately affected farmers without capital reserves or alternative income sources, as they were less able to procure high quality inputs without the support of a loan from Cheetah.

It was not just in the delivery of inputs that Cheetah suffered problems of timing. Farmers recalled that Cheetah was late in collecting their loan repayments in maize in 2014. Late collection raises the risk that pests will attack the maize, or it will start to rot. This is important as Cheetah buys maize by

[319] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016. Interview with Brad Brown, Cheetah Development Senior Vice-President Impact Investment and Philanthropy, Skype, 07/10/2016.
[320] Interview with Brad Brown, Cheetah Development Senior Vice-President Impact Investment and Philanthropy, Skype, 07/10/2016.
[321] Interview with Otto Ulyate, Farm Manager, Rutuba Farm, Iringa, 01/12/2016.
[322] Interview with Gary Vaughan-Smith, Chief Investment Officer, SilverStreet Capital, London, 13/05/2016.
[323] Interview with farmer 115, Vitono, 08/08/2016.
[324] Interview with farmer 98, Kipaduka, 20/10/2015. Interview with farmer 45, Kitelewasi, 23/09/2015. Interview with farmer 42, Vitono, 01/10/2015. Interview with farmer 84, Vitono, 09/10/2015. Focus Group with Cheetah Development farmers, Vitono, 02/10/2015.

weight, and the price per kilo depends on the quality. Farmers complained that the longer Cheetah delayed maize collection, the lower the price they were likely to receive for their maize due to decreases in quality. Late loan repayment also increases the risk of side-selling (or 'corruption' according to Menard[325]) as farmers worry about the decreasing quality of their maize and need cash to cover their costs and budget for the year ahead: 'due to delay of Cheetah taking the crops, farmers sell the crops to the middlemen leading to failure to pay back the loans'.[326] This problem is exacerbated by the fact that the Cheetah loans must be repaid in produce in order to qualify for a new loan, and so the farmers cannot use the money raised from selling their maize to *dalali* to repay the Cheetah loans at a later date (see Section 8.4.2.1.).

In 2015–2016 there was a further catastrophic failure of communication between Cheetah and the farmers. When I was conducting research in villages in Lower Kilolo in November 2015, Cheetah farmers were still waiting for their maize inputs to be delivered. They had to sit by and watch other agricultural development organisations, like 1AF, deliver inputs to their farmers, but still they had not heard from Cheetah about when their inputs would arrive.[327] When I returned to those villages in July 2016 I found that no inputs had been delivered, as Cheetah had failed to come to an arrangement with a lending partner to provide capital to purchase the inputs.[328] Farmers had wasted crucial time waiting to receive inputs that never came. Many ended up planting late, or had to buy seed from the shop at peak price during the planting period. Cheetah had collected joining fees and conducted the credit assessment process for new members, before informing them that they would not actually be provided with inputs for that planting season:

> *'Cheetah not bringing the agricultural inputs has made us take a step back in lots of things. If we continued working with them until today, we would have been far. And they are the ones whom had a bad leadership system leading to failing to work with the farmers.'*[329]

> *'I did not get the loan from Cheetah despite being promised. I ended up using local seeds with no fertiliser, something which led to little harvests.'*[330]

> *'We didn't get the inputs. After Cheetah refused to give us the inputs we just cultivated with local seed. That has contributed to having less harvest this year [2015-2016] because when*

[325] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[326] Interview with farmer 86, Kipaduka, 25/07/2016.
[327] Participant observation of One Acre Fund input delivery, Kipaduka, 04/11/2015.
[328] Interview with Joy Hazucha, Cheetah Development, Senior Vice President People, Culture, and Growth, Iringa, 08/08/2016.
[329] Interview with farmer 80, Vitono, 21/07/2016.
[330] Interview with farmer 52, Vitono, 25/07/2016.

we needed to get good inputs to help boost the harvest we couldn't. Instead we used local seeds which normally don't have large results.'[331]

This was not received well by the farmers, as many had budgeted and planned with the anticipation of getting inputs from Cheetah. As well as negatively impacting farmers' farming preparations, this further ruptured relationships of trust between Cheetah and participating farmers.

8.4. Issues embedded in the model

The discussion thus far suggests that the weakening of the Cheetah assemblage in the 2014-2015 season were largely issues of bad management and loss of trust, and therefore avoidable and rectifiable. However, delving deeper into how the underlying values, norms, and practices of the Cheetah model interact with existing farmer livelihoods and moral economies exposes a further set of issues and clashes that undermine their compatibility. This section explores these issues, split into entrepreneurship versus prescription; embedded inflexibilities; controversy over collateral; and the challenge of enrolling the banks.

8.4.1. Entrepreneurship versus prescription

As discussed in Chapter 6, a major reason why Cheetah gives loans in agricultural inputs is to avoid the risk that a monetary loan may not be used as intended (Von Pischke & Adams 1980; Adams 1988; Gentilini 2016). Cheetah adopts this prescriptive and paternalistic perspective despite its professed commitment to form partnerships with smallholder farmers as entrepreneurs. This led to clashes and points of resistance between Cheetah and participating farmers.

While talking to farmers in Lower Kilolo, it became clear that the inputs were not always used in the way in which Cheetah intended. For instance, some farmers were selling the inputs or using the fertiliser on other crops, especially their tomatoes and sunflowers:

'The main problem to why they failed to repay the loans was due to something wrong done by Cheetah in the beginning, because whenever they gave the inputs they didn't follow up to make sure they were used as purposed. The first group of people were selling the inputs and using the money on different issues, leading to bad harvests, and the second group took the maize fertilisers to tomato farming.'[332]

[331] Interview with farmer 50, Vitono, 25/07/2016.
[332] Interview with farmer 55, Vitono, 21/07/2016.

Menard interpreted this diversion of inputs as 'corruption', with farmers resisting to be disciplined through the model of development as the commercialisation of maize production: 'they [farmers] know other neighbours are corrupt, but they don't want to tell us. They know that they are side selling and they don't call us and warn us. They know that stuff is being used for other crops and they don't say a word.'[333] For the farmers, however, this diversion of inputs to the crops that they designate as for 'business' makes sense in terms of boosting income potential, especially following a couple of years of plentiful maize harvests that met subsistence needs. From this perspective, the farmers were practising everyday resistance against the prescriptive Cheetah model by acting as entrepreneurs allocating resources based on their assessment of costs and benefits. This demonstrates a point of tension between Cheetah's promotion of a vision of entrepreneurial and capitalist smallholder agriculture, and their attempt to assemble a rigid and disciplining vision of what this will look like in Lower Kilolo.

8.4.2. Inflexibility

As explained in Chapter 7, trust between borrowers and lenders, and a common appreciation of the challenges other farmers are facing within the village, means that there is often a degree of temporal and material flexibility in farmer-to-farmer loans. Repayment deadlines are sometimes extended to the following harvest, and there is the potential for negotiation over repayment in different forms, for example in labour, cash, or other produce. With the loans from Cheetah, however, there is no such flexibility due to pressure on the organisation to repay their own loans to the bank, pressure to provide some sort of a return for their investors, and its desire for farmers to conform to the norms of standardised financial practices to become 'investable' and 'bankable'.

8.4.2.1. Material inflexibility

As discussed in the previous chapter, there are multiple demands on farmers' harvests, and maize becomes enrolled in various and sometimes conflicting assemblages. These include using maize for food in the form of *ugali*, making offerings to the church, sending food to children at boarding school, as a form of tangible savings, and as a means to access cash through sale. How maize is used by farmers, and how these uses are prioritised, has influenced the outcomes of the Cheetah programme as it demands loan repayment in maize. Examining these clashes fleshes out what may otherwise be dismissed as default despite ability to repay. It also demonstrates the fragility of the lines drawn between different spheres of value in Lower Kilolo.

[333] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.

Menard believes that a major problem with many microfinance projects is that 'they can't succeed because the farmer can't grow more than they can eat, so you are asking them to make a decision between selling you the food they would live on, or dying. How can you expect them to make that decision?'[334] After the poor harvest of 2015, however, many participating farmers were forced to make difficult decisions about how they prioritised uses for their maize. Moreover, on occasion multiple members of the same family took loans from Cheetah that they were unable to repay in 2015. While shadowing Cheetah field teams enforcing loan repayment with the auctioneer in Mwatasi village, I met a family in which the mother, father, and daughter were all indebted to Cheetah.[335] This meant that they were unable to fall back on the social support network of their family to help them to repay.

A farmer in Vitono explained that to feed his household of eight people with a small buffer in case of emergencies he needs ten *gunia* of maize for the year.[336] In 2015, however, he only harvested six *gunia*. He prioritised keeping all his maize to feed his family rather than repaying the Cheetah loan of four bags, and therefore defaulted and was taken to court by Cheetah. Similarly, another farmer had recently sent her child away to boarding school and was required to provide enough maize to feed him for the year.[337] This meant that she defaulted on her Cheetah loan, as due to her harvest being smaller than usual she was unable to save enough maize to feed those living in her house, send money to her child's school, and repay the loan. She would usually give some maize away to orphans and make offerings to the church, but in 2015 she was also unable to do that. For farmers like these, defaulting was a decision to prioritise household needs over repaying Cheetah loans. It represents a form of resistance to the rigid imposition of loan repayment in maize when it is in short supply.

Cheetah is unwilling to allow farmers to substitute repayments in maize for repayments in money, and if they repay in money they will not be considered for another loan. This effectively shuts down alternative repayment options for farmers who want to retain all their maize to feed their family, but who are able to pay using capital raised from alternative livelihood sources. Cheetah is unwilling to accept repayments in money as the business model depends on taking a cut when the maize is sold on to the market buyer. For the farmers, however, in some cases repaying their loans in money makes more sense than repayment in maize.

The Cheetah model is based on the presumption that farmer incomes are centred on the maize harvest. They aim to increase farmers' harvests so it is large enough to create a surplus to pay back the loan,

[334] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[335] Participant observation with Cheetah field team, Mwatasi, 23/10/2015.
[336] Interview with farmer 112, Vitono, 08/08/2016.
[337] Interview with farmer 52, Vitono, 25/07/2016.

make a profit, and still feed their families. This presumption of a single injection of income after the harvest, however, does not always match complex farmer livelihoods. Chapter 7 discussed the dynamic cash economy that exists in villages in Lower Kilolo, and how farmers are able to access cash much more often—and with more ease—than the Cheetah model seems to expect. This represents another instance of where Cheetah's assumptions of farmer livelihoods do not match farmer realities. Farmers often have non-agricultural incomes from *kazi* or *biashara ndogo*, or can access capital through selling business crops, hiring out livestock or equipment, or working on the fields of other people for money. Furthermore, there are vibrant lending and borrowing relationships within the villages, and these farmer-to-farmer loans are often materially flexible. Although the Cheetah model is beneficial in opening up loan schemes to farmers without other income sources, some degree of flexibility in repayment structure that recognises the multiple demands on farmers' maize harvest, and how this may shift depending on personal circumstances and yields, may be crucial to the durability of the programme.

With this in mind, it is important to pay attention to the heterogeneous experiences of farmers, as not all were faced with the decision of repaying their loan or experiencing the risk of food insecurity:

> *'**Participant**: For those who followed the agricultural procedures, the harvests have been very good. I got some big results because through them [Cheetah] I learnt to practice the good agricultural procedures. Before Cheetah I could harvest only 22-23 sacks but after Cheetah I harvested 76 sacks. Individually, Cheetah and I didn't have any problems because they even bought my crops nicely.*
> ***Interviewer:** Have you had any problems with paying your loan?*
> ***Participant**: I didn't get any problems with paying, and in fact Cheetah still owes me money. The money is being held after most of the other farmers failed to pay back the loans.*
> ***Interviewer**: How did you feel about not getting a new loan in 2015?*
> ***Participant:** I didn't feel that bad because after seeing the real situation I arranged myself in other ways and God helped me and I did the farming well. I actually harvested more [in 2016], because I already had the capital to continue.'*[338]

The fact that only some farmers faced an 'impossible choice' highlights the importance of looking at which farmers a programme or intervention may help or hinder. Here, Bernstein's (2010) tripartite classification of smallholder farmers is a useful guide:

1) Those who derive their livelihood primarily as paid agricultural labourers;

[338] Interview with farmer 55, Vitono, 21/07/2016.

2) Those who depend on family labour to grow their own food and trade or sell small surpluses;
3) Those who engage in a more capitalist style of farming, and produce and trade cash crops.[339]

As discussed in Chapter 6, participation in the Cheetah programme is open to those in categories two and three as long as they pass the credit assessment and can provide enough maize as a joining fee. The fact that some farmers were forced to make a choice between feeding their families or repaying their loan in 2015 suggests that farmers in the second category may struggle to meet the terms of programme participation in times of bad harvest if they do not produce a sufficient surplus. These farmers risk becoming food insecure if they have to give up a significant proportion of their maize as loan repayment. Farmers in the third category, however, may still be able to produce a surplus even in times of hardship. This suggests that Cheetah's eligibility requirements and credit assessment process are unsuitable for ensuring that farmers can absorb the risks of participation without becoming food insecure. It may be that there are multiple alternative experiences and understandings of a 'moral economy' in terms of obligations, responsibilities, and flexibilities surrounding loans within Lower Kilolo, and what works for one group of farmers may not necessarily work for others.

8.4.2.2. Temporal inflexibility

Another way in which Cheetah shuts down alternative pathways and coping mechanisms is through temporal inflexibility. While farmer-to-farmer loans are often temporally flexible, with repayment being postponed to the following harvest, Cheetah enforced rigid repayment timetables despite the hardship this caused. In Vitono, a group of participating farmers wrote a letter to the Cheetah office describing the situation they faced after the 2015 poor harvest.[340] They attempted to reach a compromise by asking if they could delay repayment to the following year, and receive a loan of half the standard size to enable them to harvest enough to pay back their loans. Instead, Cheetah proceeded to take a few farmers to court to enforce repayment or the repossession of collateral. This represents the criminalisation of farmers who dissent from Cheetah's vision of development as commercial maize farmers adhering to a particular temporal understanding of financial discipline, and thus fail to play to play the role ascribed to them in the Cheetah assemblage. Farmers in Vitono expressed the perceived injustice of this situation:

> *'With Cheetah, they wait until you harvest and then you have to pay whether you had enough harvest or not.'*[341]

[339] Taken from Dowd-Uribe (2016, p.3), drawing on Bernstein (2010).
[340] Interview with village chairman, Vitono, 16/07/2016.
[341] Interview with farmer 113, Vitono, 08/08/2016.

'It got to the point where Cheetah wanted to sue the farmers. I had to talk to them to settle it down and ask for a time extension, but until now the farmers are still paying back the loans. This hurt the farmers emotionally as it showed Cheetah thought we weren't trustworthy. We had to write them a letter about the situation and asked to pay back their loans this season, but they have been collecting their money until now. The farmers were even asking if they can get at least half of the loan this year on top of the other one, but Cheetah didn't agree to give other loans in fear of failure to repay.'[342]

This controversy over temporal flexibility highlights contradictions at the intersections of capitalism, agriculture, and time within the Cheetah model; it especially suggests clashes over the theorisation of the temporal logics of debt calculation. For Cheetah, time and money are lineally related with calculations like interest rates accounted for incrementally. In other words, time is money. By comparison, in Lower Kilolo the relationship between time and money is more fluid and dynamic, and is often conceived of in terms of seasonal tasks and agricultural production cycles. This is demonstrated by the experiences of farmers delaying repayments to the following harvest based on recognition of poor weather or individual hardship. In farmer-to-farmer loans time is not money, but is instead a signifier of enduring socio-economic relationships. Temporal flexibility is closely related to the social and physical proximity that characterises farmer-to-farmer borrowing and lending, in comparison to the more distanced and disciplining commercial loans based on rigid repayment timetables. These rigid repayment schedules close down alternative pathways and coping mechanisms, especially when combined with material inflexibility dictating that farmers who fail to repay in maize by the deadline are prohibited from accessing future loans, and may face the pressure of the repossession of collateral.

Figures 8.4 and 8.5 graphically represent the linear and closed pathway to loan repayment as conceptualised by Cheetah, compared with some of the temporally and materially flexible and repayment pathways as conceptualised by farmers.

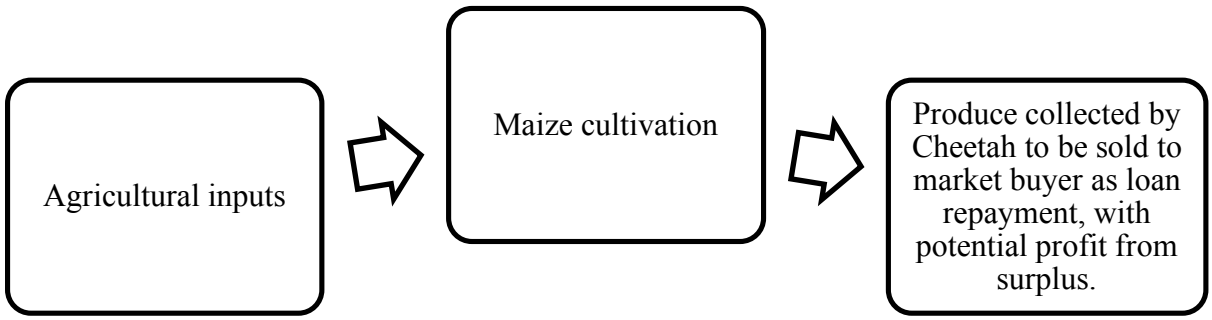

Figure 8.4 Depiction of Cheetah's conceptualisation of the agricultural pathway to loan repayment.

[342] Interview with farmer 50, Vitono, 01/10/2015.

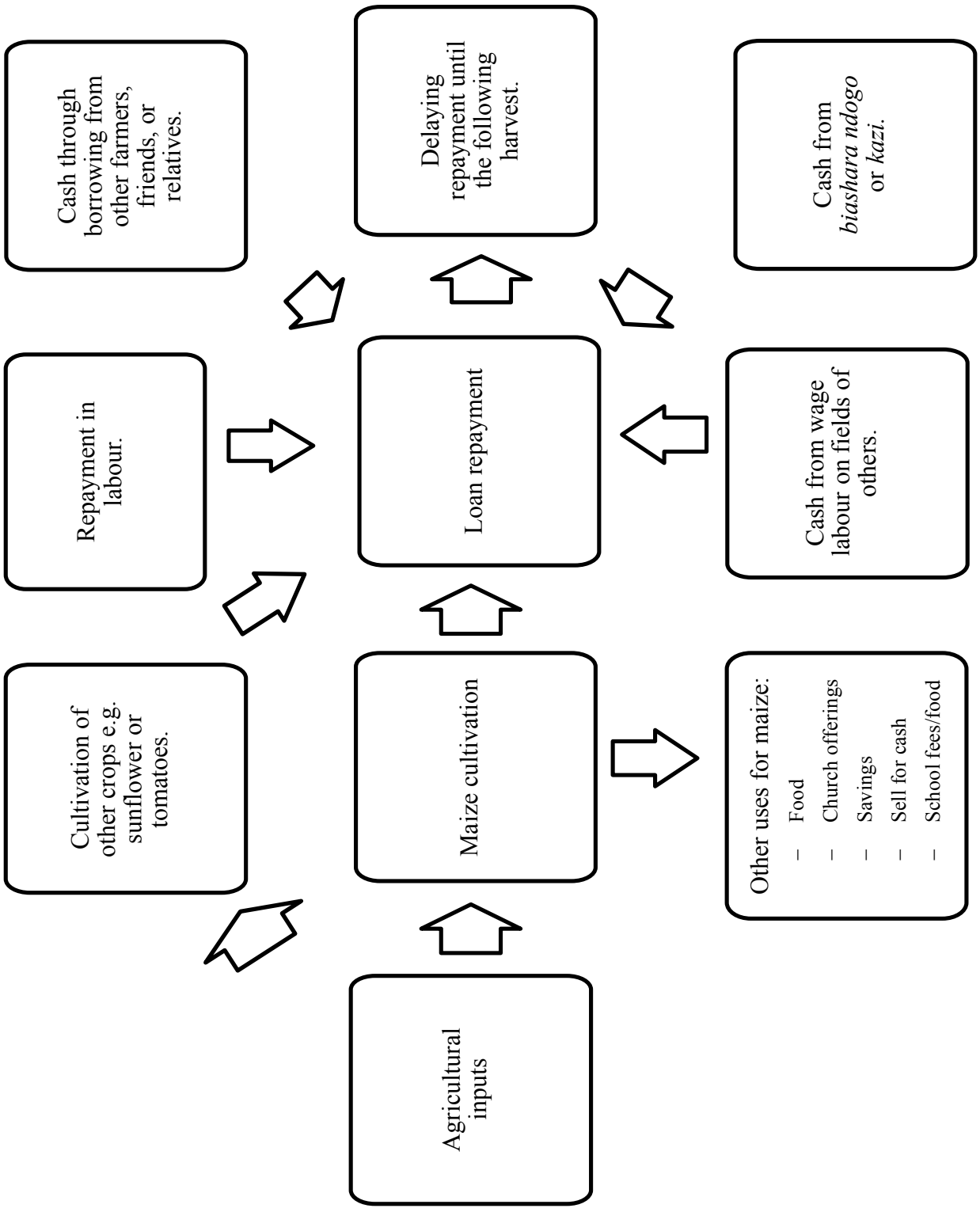

Figure 8.5 Depiction of a range of possible agricultural and repayment pathways open to farmers.

8.4.2.3. Inflexibility of accountability

In 2015, farmers who had repaid their loans in full and theoretically made a profit on the sale of their maize also came up against the inflexibility of the Cheetah model:

> *'They said after selling the maize the profit will be returned. I got TSh 30,000 profit but that money was never returned.'*[343]

> *'**Participant:** Cheetah still owes me money. The money has been held after most other farmers failed to pay back the loans. I feel the pain because legally I paid their loan back and they're supposed to pay my profit, but since others failed to pay I have nothing to do about it.'*
> ***Interviewer**: Why do you think Cheetah didn't give you the loans last year?*
> ***Participant**: It's because of the farmers that failed to return the loans the previous year. All new loan administration was stopped even though we asked for the loans. It would be fair to give the loans to the ones who paid back their previous loans.'*[344]

As the quote above suggests, part of the reason why Cheetah delayed the payment of profits to farmers who had repaid their loans in full in maize was due to the inflexible enforcement of the system of joint and several accountability: not all the farmers in the village had paid back their loan in full, so profits could not be distributed to those who had. Although farmers were aware of this system, many who had theoretically received a profit felt like they were being punished for the problems of other people: it was not 'fair'.

While Cheetah attempted to treat farmers as village-based groups in order to promote peer pressure in loan repayment, the farmers saw cultivation as an individual livelihood stream, especially in times of hardship related to environmental disruptions. There is, therefore, a tension between collective responsibility and individual entrepreneurship. For farmers, individual decision-making provides opportunities for flexibility and choice, while group membership provides flexibility and security of finance through, for example, borrowing and lending. By comparison, Cheetah constrains the activities of the individual by prescribing how inputs are to be used and the form and timing of repayment, and also adds extra constraints and rigidity through joint accountability of participating farmer groups. This is another example of Cheetah inflexibly enforcing their model to meet their own needs (to repay their own loans to the bank, make a profit, discipline farmers, and satisfy investors) at the expense of the needs of participating farmers. The failure to deliver profits further served to undermine farmer trust in Cheetah and reduced farmers' ability to plan for and invest in the following planting season.

[343] Interview with farmer 51, Vitono, 25/07/2016.
[344] Interview with farmer 55, Vitono, 21/07/2016.

8.4.3. Controversy over repossession of collateral

To be eligible for a Cheetah loan, farmers have to declare what possessions they will put up as collateral on the credit assessment form. According to Menard, 'we don't take people's land away from them, but we would take their goat and we would take the roof off their house.'[345] Unlike many formal loan schemes, therefore, Cheetah does not require property title, but instead is willing to accept a range of different forms of collateral including buildings, livestock, cars, motorbikes, tractors, and consumer goods. It is unclear whether the monetary value of the collateral has to equal the monetary value of the loan, or if they take into account the use and symbolic value of the object to the farmer. Menard argued that 'the collateral is more than symbolic because of the two tiers of accountability. It is more than symbolic, and it drives them crazy, honestly, and they don't want it.'[346]

After many farmers failed to pay their loans by the deadline in 2015, Cheetah hired a local auctioneer, and together they visited villages pressurising farmers to repay their loans or risk having their possessions seized.[347] In Vitono, one farmer was facing the repossession of his car (which didn't even run) as he had recorded it as collateral on the credit assessment form.[348] The farmer was arguing that his inability to repay was out of his control due to poor rains and the rat infestation, and the repossession of his car would leave him worse off than before he was accepted onto the programme. From the perspective of the farmer, his income from agriculture was distinct from the asset of his car, and repossessing it was akin to taking without reason, or even stealing. His car and his maize were not directly exchangeable. In the eyes of Cheetah and the auctioneer, however, through the credit assessment form the fate of his car had become directly tied to the performance of his crops in the fields. Luckily for the farmer, due to circumstances unforeseen by Cheetah he was able to keep his car:

> *'No, they didn't [seize the car]. We explained the situation to them since they were coming back giving penalties and new deadlines, but thank God, the confiscation hasn't happened yet. We started paying back their loans this year because at least the harvests have been good. Confiscating possessions is something that is very impossible.'*[349]

[345] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[346] Interview with Ray Menard, Cheetah Development Founder and CEO, Skype, 17/05/2016.
[347] Participant observation with Cheetah field staff, Mwatasi, 23/10/2015; Irole and Vitono, 27/10/2015; Kipaduka and Itungi, 31/10/2015.
[348] Interview with farmer 59, Vitono, 01/10/2015.
[349] Interview with farmer 59, Vitono, 21/07/2016.

When Cheetah attempted to enforce loan repayment through the court system in 2015 they came across a problem: they had not followed local government stipulations for requiring collateral on loans, and so the courts were unable to ratify repossession. Instead, farmers were urged to repay as soon as possible, with interest increasing daily.[350]

8.4.4. Enrolling the bank: distancing

Relations of trust within the Cheetah assemblage are further complicated by the enrolment of commercial banks. As we saw in the previous chapter, farmers in Lower Kilolo District do save, but often not in ways that are easily recognisable through the lens of finance. Cheetah, on the other hand, sets farmers up with bank accounts into which their profit, if they receive one, is to be delivered. The rationale is to establish a credit rating for the farmers so that they are eventually able to access financial services including bank loans and insurance, and to enable them to budget and save for future expenses. In other words, Cheetah aims to operate as a node through which farmers become enrolled into a multitude of financial assemblages.

Depositing savings in a bank account, however, presents challenges for the farmers. In practical terms, the nearest bank branches in Lower Kilolo are based in Iringa and Ilula towns. This means that to withdraw or deposit money the farmers need to travel to these towns, which in the absence of reliable and regular public transport takes time and effort:

> *'When they take our maize they tell us maybe to come in two weeks, and when we get there they give us the letter to go to MuCoBa Bank. When we get to the bank, the bank tells us again to go back to Cheetah. The circle goes on and we end up not getting the money for months, wasting money on transportation that we are supposed to use to pay back their loans and even for farming in the next season, something which is discouraging.'*[351]

This challenge of physical distance between the banks and the farmers can be mediated by the use of a mobile banking system like Vodafone's M-Pesa. M-Pesa allows people to monitor savings and transfer money between accounts on their mobile phones, as well as deposit and withdraw money with village-based *wakala* (agents). During a field visit with the Cheetah team in 2015, a farmer asked if he could transfer the money that he owed using M-Pesa as he had the amount in his account, but did not currently have it in cash. The Cheetah field team told him that they did not use M-Pesa due to concerns over reliability, and of being misled by farmers over their ability to repay. There was only one bus a day for the three hour drive to the nearest town with a bank branch, so the farmer instead

[350] Interview with farmer 112, Vitono, 08/08/2016.
[351] Interview with farmer 81, Vitono, 08/08/2016.

had to go around the village borrowing cash from other people and paying them back individually using M-Pesa. When I returned to Iringa in the summer of 2016, Cheetah had begun to use M-Pesa for loan repayment to streamline the process, and to strengthen assemblage relations by reducing the physical distance between the farmers and the bank.

As well as a lack of physical proximity, enrolling the commercial bank builds in another layer of social distancing by obscuring the links between the farmers and those who ultimately lay claim to their debt (Clapp 2014). This distancing has been exacerbated by poor communication between Cheetah, the commercial banks, and the farmers. In Vitono, the Cheetah village agent explained that first of all Cheetah registered them with CRDB, but then they were told that their accounts were being switched to MuCoBa, and now they were being moved to another bank.[352] They were not informed as to why these moves occurred, and had to pay a fee each time. This raised concerns that they might lose money during the transfers, and might be saddled with high interest rates without their knowledge. It is unclear exactly why these shifts in banking partners occurred, but Marco Johnson, Cheetah Vice-President Field Operations, explained that 'this operating environment is so difficult. We have run into some problems with our bank partner to the point where we are not even sure that they are solvent. We are working with farmers that they did lend to… to pay back the loans so we can just dissociate ourselves from them.'[353] It was therefore not only the relationships between the farmers and the bank that were strained, but also those between the bank and Cheetah.

8.5. Summary

The Cheetah programme collapsed in 2015 due to a combination of poor implementation and issues embedded in the model, leading to clashes with the flexible lived realities of farmer livelihoods in the context of environmental disruptions. Clashes surrounding implementation are avoidable and rectifiable, while those with their roots in the underlying assumptions and form of the model itself undermine the future of the programme.

A major difficulty from 2014 was the breakdown of relationships of trust between the Cheetah staff and participating farmers, leading to a weakening of the assemblage. Trust broke down for two main reasons, one avoidable and the other inbuilt into the functioning of the Cheetah model. Firstly, trust broke down due to poor implementation by Cheetah staff from 2014. Allegations of corruption, stealing, and incompetence led to the replacement of field teams and a breakdown in communication

[352] Focus group with Cheetah Development farmers, Vitono, 02/10/2015.
[353] Interview with Marco Johnson, Cheetah Development Vice President Field Operations and President Pearl Foods, Iringa, 12/09/2015.

and points of contact between farmers and the organisation. Farmers felt that the organisation was not listening to them, and did not care about the problems they were facing. They also felt deceived by miscommunications over the existence of insurance in the case of bad weather, which undermined their tendency for risk-averse behaviour. Secondly, the principles on which famers were enrolled into financial assemblages differed in important ways between farmer-to-farmer loans and the Cheetah model. While farmers emphasise trustworthiness in deciding who receives a loan Cheetah stresses a more formalised, inflexible, and distanced conception of creditworthiness. This is evident in how Cheetah assesses who qualifies for a loan—based on a credit assessment form rather than social and physical proximity—and in Cheetah's attempts to discipline farmers through materially and temporally inflexible prescriptions, despite farmers' reports of the unfairness of enforcing loan repayment in a time of hardship. In other words, this is an example of clashing perspectives over what are ethical socio-economic relations.

Despite valorising farmer entrepreneurship, Cheetah prescriptively provides loans in inputs rather than cash, and intends for them to be used only on the maize harvest. Some farmers, however, see the inputs as more productively allocated elsewhere, for instance on their tomato or sunflower business crops. Entrepreneurial farming in Lower Kilolo can, therefore, look very different to that promoted by Cheetah. The Cheetah model is similarly inflexible temporally, materially, and in terms of the accountability framework. Cheetah prioritises the use-value of maize for commercial sale to repay loans and make a profit: financial discipline effectively erases socio-cultural difference. This is due to the need to generate a profit for the company from the sale of the maize harvest to provide capital for the continuation of the programme and to provide a return to investors.

Clashes occurred over delimitations of spheres of value, the prioritisation of these spheres of value, and the ability of socio-material entities to move between them: maize is enrolled in different ways into the socio-economic and moral assemblages of Cheetah and of the farmers. For farmers, maize can play a role in multiple spheres of value and socio-cultural and economic networks. It is used to make *ugali*, to meet obligations to the church, and in saving and budgeting. In a time of environmental hardship, multiple competing demands on a smaller than average maize harvest meant that these contradictory prioritisations of the use-value of maize became points of conflict. Cheetah attempted to discipline farmers—and encouraged farmers to discipline each other through joint accountability—into adhering to their idealised vision of commercial maize farming through working with an auctioneer to enforce repayment and threatening the repossession of collateral. Meanwhile, the farmers attempted to open up alternative pathways by requesting to repay the loans in money and extend the time period for repayment to the following harvest, as may have occurred with farmer-to-farmer loans under similar circumstances. When these attempts were thwarted, the relationship

between Cheetah and its farmers fell apart to the point where the viability of the programme itself was in question.

When Cheetah went to register farmers and collect joining fees in the summer of 2016, they only received eight bags of maize from Lower Kilolo.[354] This was not sufficient to make the programme economically viable, and as of September 2016 its future was in jeopardy. This represents farmers' agency to 'push back' and assert their own moral economy and alternative coping strategies when they are seen as more appropriate means to 'get by'.

This analysis of the fall-out from the environmental disruptions in 2014–2015 in Lower Kilolo reveals that Cheetah's rigid vision of ethical capitalism constructed through enforcing financial and commercial discipline in maize farming had unexpected impacts in Lower Kilolo. While in times of good weather the programme was generally deemed to be a success, under conditions of environmental disruption a series of clashes and contradictions emerged. The result of these clashes was that—contrary to its narrative of promoting positive social and financial impacts—Cheetah failed to align the aims, assumptions, values, and morals of their financial model with smallholder farmer livelihoods and moral economies in Lower Kilolo. This entailed the enforcement of loan repayment despite associated hardships relating to competing demands on farmers' harvest, and the material and temporal inflexibility of loan repayment. Crucially, it also entailed the perception amongst participating farmers that Cheetah was not listening to them, was ignoring their problems, and was failing to live up to its responsibilities. This outcome was partly due to avoidable issues of implementation, but also due to faulty assumptions about farmer livelihoods, and inflexibilities that shut down alternative pathways to loan repayment. This is in contrast to the materially and temporally flexible moral economies of the farmers in Lower Kilolo, which allow for multiple alternative pathways and coping strategies.

[354] Interview with Joy Hazucha, Cheetah Development Senior Vice-President People, Culture, and Growth, Iringa, 08/08/2016.

9. Conclusions

9.1. Introduction

This thesis has investigated how social impact investing (SII)—investment with the intention to generate directly correlated positive social impacts and financial returns—interacts with smallholder farming in the Lower Kilolo District of Tanzania. I unpacked how SII takes shape, how it is translated into the Tanzanian context, and how it interacts with farmer livelihoods. SII is being promoted by a range of actors from investment and development circles as a means of financing programmes to boost agricultural productivity in the Global South, and particularly in Africa. Agricultural productivity increase is, in turn, being presented by investors, business leaders, development actors, philanthropists, and politicians as a solution to a nexus of challenges relating to global food security demands, national economic growth and domestic poverty alleviation, and energy security concerns. Although it is difficult to reach definitive figures due to a lack of transparency, the number of SII deals and the amount of money flowing into African agriculture have increased since the late 2000s.

I explored SII through a political ecology lens, drawing on the concept of assemblages to understand how and why actors enter into relationships, how those relationships hold together—albeit temporarily—and how they break apart or are reassembled. Three analytical themes of power (discursive, disciplinary, and institutional), culture through moral economies, and the role of socio-material entities were employed to interpret processes of relationship assembly and disassembly.

In the empirical chapters, I firstly examined how SII is unfolding in African agriculture to unpack the drivers, assumptions, narratives, motivations, and ethical perspectives behind why different actors are engaging in SII and to what ends. Secondly, I focused on how the concept of SII travels and is translated in the Tanzanian agricultural context. Using the case study of Cheetah Development as a key node through which smallholder farmers interact with financial assemblages, I studied how SII is translated into a practical model, and what happens when this model is implemented in the context of farmer livelihoods and moral economies.

This concluding chapter firstly summarises the major findings from each of the empirical chapters, which correspond to the four major research questions. I then synthesise these findings to discuss the usefulness of this approach to political ecology analyses of agricultural development. Finally, I make some recommendations for further research.

9.2. Research Findings

I have addressed four key objectives with a series of sub-questions:

A. How is SII in African agriculture emerging?

- What is driving SII?
- Who are the social impact investors, and what are their motivations?
- How is 'social impact' defined and measured?
- How is African agriculture being constructed as a site for investment?

B. How is SII translated in the Tanzanian context?

- How do different actors translate SII into the Tanzanian context?
- How does Cheetah Development assemble itself as a social impact investor?
- How does Cheetah Development diagnose the problem of agricultural development in Iringa Region, and what model do they pose as a solution?
- How is this model underpinned by discursive, disciplinary, and institutional power relations?

C. How do smallholder farmers assemble their livelihoods in the Lower Kilolo District of Tanzania?

- What livelihood activities do farmers conduct and why?
- How do farmers engage with finance?
- What moral economic relations underpin these livelihood activities?

D. How does the Cheetah Development model unfold when it meets the messy realities of farmer livelihoods in Lower Kilolo?

- How did the Cheetah assemblage fall apart in the context of environmental disruptions in 2014–2015?
- How did Cheetah attempt to enforce its model using discursive, disciplinary, and institutional power?
- How did the 'ethical capitalism' of the Cheetah model clash with farmer livelihoods and moral economies?

9.2.1. Social impact investing: 'from helping the rich get richer to helping the poor get richer'

My first research objective, addressed in Chapter 5, was to investigate how SII is emerging in African agriculture. Based on document analysis and interviews with key informants, I outlined four major drivers of SII, especially from the late 2000s:

- A search for new profitability frontiers in the wake of the financial crisis in the late 2000s;
- A recognition of the business case for more 'socially impactful' investment;
- A moral crisis surrounding the nature and purpose of investing, and putting capital to work to 'do good';
- A shift in philanthropic circles towards investing as a more sustainable funding option.

Despite actors being united around the commitment to build a more ethical capitalism that generates positive social impacts for smallholder farmers, the varied drivers of SII are resulting in a diverse and incoherent sector. SII is being adopted by a wide range of different actors; is being imbued with different meanings and expectations; and is being put into practice in a variety of ways. This diversity and incoherence is particularly evident in the multiple ways in which 'social impact' is interpreted, implemented, and measured. While SII models are commonly built around a theory of change that discursively links investment to positive social and financial outcomes, the links between these tend to be under-theorised and can be based on widely disputed tropes and assumptions. There is continuing debate over whether 'dollars in pockets' is enough to constitute social impact, and whether it is necessary to measure social impact at all. This raises questions about whether some SII is just standard investment that has been discursively repackaged to enable the pursuit of new markets.

African agriculture is particularly appealing for social impact investors. It has been framed as a site for SII based on a number of factors:

- Demographics, and the reshaping of the Malthusian population threat as a business opportunity;
- Agro-ecology, and the diversity of crops that can be grown commercially. Africa is (somewhat misleadingly) portrayed as having abundant underutilised land and water resources without requiring widespread deforestation;
- Political context, as African governments are increasingly opening up their economies to foreign investment, often supported by other organisations, for example through the Southern Agricultural Growth Corridor of Tanzania (SAGCOT);

– Potential for social impact, on both the global scale through financing the new green revolution (NGR) in Africa, and at the local scale by enrolling smallholder farmers into profitable agricultural value chains to alleviate poverty.

The result is the reshaping of Africa from being the 'lost continent' of aid and poverty, to an Africa that is 'rising' and comprised of countries that are 'lions on the move'. This narrative, however, continues to be justified by the trope of Africa in need of help to catch up with other emerging and industrialised countries. The Africa rising narrative also has a tendency to embrace agro-ecological diversity, while homogenising socio-economic and political differences between and within countries. After a series of failed investments in the late 2000s and early 2010s relating to unforeseen social, political, and economic challenges as well as poor investment management, another discursive shift has occurred towards greater scepticism. Investors are beginning to approach the continent with a greater degree of selectivity based on recognition of local social, political, and economic context, leading to uneven geographies of investment both between countries and within them.

9.2.2. Social impact investing in Tanzania

Chapter 6 focused on how SII travels and is translated into the Tanzanian agricultural context. I sketched out an institutional SII assemblage composed of various actors united by a discursive commitment to building more ethical capitalist relations in the agricultural sector in Iringa Region. These actors include private equity social impact investor SilverStreet Capital and their Silverlands operation; the public-private partnership of the SAGCOT; and hybrid social impact investor Cheetah Development. Despite their common commitment to build more ethical capitalist relations in the agricultural sector, these actors interpret SII in different ways, take different perspectives on the distribution of roles and responsibilities within the SII assemblage, and experience a range of practical barriers to generating positive social and financial impacts. These challenges of translating SII into the Tanzanian agricultural context introduce points of weakness and fragility into the assemblage, and curb its ability to achieve intended aims.

After setting out this institutional assemblage in the Tanzanian agricultural sector I concentrated on Cheetah Development as a key node through which farmers interact with finance, and are thus enrolled into the SII assemblage. Cheetah is a social impact investor in two ways. Firstly, it seeks financing from investors who expect to receive a return of—and ultimately a profit on—their capital as well as the satisfaction of generating positive social impacts. Secondly, Cheetah itself invests for positive social and financial returns in smallholder farmers. Through the Cheetah model, SII is translated into financing the filling of gaps in agricultural value chains, which in turn is translated into Cheetah's specific vocabulary through concepts like 'metafinance' and 'micro-social venture capital'.

This vocabulary obscures how Cheetah has borrowed and assembled models and mechanisms from a variety of other sectors, especially microfinance and venture capital. In practice, Cheetah's translation of SII manifests itself through its franchise companies, of which Pearl Foods is the focus of this thesis as it directly deals with primary smallholder farmer production.

Cheetah diagnoses the challenge of agricultural development in Iringa Region as comprising of two issues: a lack of economy and problematic farmer mindsets. By framing a lack of economy as the major barrier to agricultural development, Cheetah frames the private sector as the solution, rather than the government or NGOs. Focusing on farmer mindsets enables Cheetah to avoid dealing with structural causes of poverty, and instead shift responsibility onto the farmers. Cheetah's solution, Pearl Foods, involves the provision of high yielding hybrid maize seeds and synthetic fertiliser on credit, which the farmers repay in maize after the harvest. The produce is then sold on to a market buyer, Silverlands, and any profit after Cheetah has repaid all their debts to the bank and taken their cut is placed in the farmers' bank accounts. In this way, Cheetah envisions the construction of parallel value chains that incorporate entrepreneurial smallholder farmers as 'partners' to render them 'creditworthy', 'bankable', and 'investable'. Although Cheetah appears to play a role similar to the *dalali* (middlemen who go from door-to-door purchasing produce) in these parallel value chains, they assert their uniqueness based on moralistic arguments of building more just and transparent socio-economic relationships. This is in contrast to the *dalali,* who are depicted as exploiting smallholder farmers to maximise their own profit.

Despite claiming to build more ethical capitalist relations that enrol smallholder farmers as investable partners, the ways in which they intend to achieve this involve an assemblage of power relations that are prescriptive and paternalistic. The Cheetah model is premised on a set of discursive assumptions about both smallholder farmers and the African environment that are widely disputed by political ecology scholars, for example smallholder farmers as 'lazy' and 'ignorant', and Africa possessing large unused land and water resources. Cheetah also does not seem to trust farmer decision-making, despite presenting them as entrepreneurs. Instead, they exert disciplinary power by prescribing farmer activities through providing loans in-kind and requiring repayment in produce. Farmers who dissent from the role ascribed to them in the Cheetah model are disciplined through the principle of joint and several accountability, meaning that individual farmers cannot receive their profit until all participating farmers in the village have repaid their loans in full. If a farmer repays in cash they cannot receive a loan the following year. These power relations are reinforced institutionally through the formation of participating farmer groups, which are intended to provide surveillance, pressurise other members to repay, and report cases of side selling and misuse of inputs to Cheetah.

9.2.3. Farmer livelihoods in Lower Kilolo

The Cheetah model is not implemented in a vacuum, and so in Chapter 7 I discussed how pre-existing and parallel farmer livelihoods and moral economic relations in Lower Kilolo are assembled. Farmers conduct multiple livelihood activities, for example *kazi* (work) and *biashara ndogo* (small business), but farming is central. A range of crops is cultivated in the *bustani* (garden) and *shamba* (farm) both for business and food, but maize is the most commonly grown crop. Farmers in Lower Kilolo fit the classic description of smallholders as risk-averse, partially involved in input and output markets, innovative when deemed appropriate, and producing primarily for subsistence, but selling surplus produce. A range of socio-cultural and socio-economic relations underpin these livelihood activities, for example divisions of labour within the household and within the village, spiritual relations, saving and spending, and borrowing and lending.

While for Cheetah maize is understood primarily as a cash crop for commercial sale, for the farmers maize is a key socio-material entity that plays a variety of roles in village life and in different spheres of value. Maize can be enrolled as food in the form of *ugali*, as an obligation to the church or mosque, as a tool for budgeting, and as a cash crop. These competing demands on maize mean that farmers are faced with complex decisions about how to prioritise their harvest.

There is a dynamic cash economy in Lower Kilolo that operates according to particular moral economic relationships and responsibilities. While there are formal moneylenders in the village, borrowing and lending between friends, neighbours, and relatives is a common practice. Farmers are familiar with concepts like 'interest' and 'collateral', and can see their value in certain situations. This undermines the argument that farmers do not understand financial management. Farmer-to-farmer loan relationships are shaped by the social and physical proximity of borrowers and lenders, and personal knowledge and understanding of each other's circumstances often replaces the need for formal collateral or interest on loans: trust is a major factor. These farmer-to-farmer loans are based on a flexible moral economy, both in terms of repayment timeframes and the material form of repayment. Repayment can be rescheduled to the following harvest, and is accepted in labour or in other crops. This flexibility is based on an understanding of mitigating circumstances or hardship experienced by the borrower that prevents repayment.

9.2.4. What happens when the Cheetah models meets farmer realities?

Chapter 8 demonstrates the fragility of the assembled relationships by examining how the Cheetah assemblage was disrupted in 2014–2015. Clashes were exposed between the Cheetah model and farmer realities in the context of low and, more importantly, intermittent rainfall and an associated rat infestation that contributed to smaller than average harvests. While these environmental disruptions

do not explain why the relationships broke down between Cheetah and participating farmers, they do suggest why problems arose in 2014–2015, as opposed to previous years in which plentiful rainfall and good harvests corresponded with positive reports of Cheetah participation.

Clashes between Cheetah and participating farmers can be divided into two groups. Firstly, clashes resulted from poor implementation by Cheetah staff, and this led to unmet expectations, a breakdown in communication, and a loss of trust. Poor implementation related to allegations of corruption, a lack of transparency in contracts, and delays to input delivery, produce collection, and profit payment. These issues of implementation weakened assembled relationships and undermined the Cheetah programme, but they are avoidable and rectifiable.

Secondly, and more crucially, my analytical focus on moral economies led me to identify clashes based on assumptions embedded in the Cheetah model, and the disciplinary and institutional power relations that were constructed to enforce them. Clashes occurred over how the model promoted farmer entrepreneurship, but implemented prescriptive discipline in terms of loan provision in-kind; over how the use-value of maize as a commercial crop was prioritised; over the material and temporal flexibility of loan repayment; over the rigid implementation of joint and several accountability that punished farmers who did repay on time in produce; and over physically and socially distanced relations with the banks. Fundamentally, this amounts to a clash between Cheetah's vision of 'ethical capitalism', and the moral economic norms of the farmers. It demonstrates that Cheetah's SII financial model constructed in boardrooms in the US based on good intentions did not play out as expected in the context of farmer livelihoods: Cheetah's financial model failed to align its perceptions of ethical capitalism with farmer livelihoods and moral economies in Lower Kilolo.

The credit assessment form (and associated algorithms) played a key role in enabling Cheetah to identify which farmers were deemed creditworthy and investable, and therefore eligible to participate in the programme. The credit assessment form solidified on paper—and thus formalised—subjective judgements about the creditworthiness of farmers. This solidification on paper turned the subjective judgement over creditworthiness into an objective fact with the ability to endure though space and time. The credit assessment forms made durable, at least for a time, the assemblage relationships between participating farmers, Cheetah, and the banks. In the boardrooms at the bank, for instance, they provided evidence that a farmer was creditworthy and therefore an acceptable borrower, even when their material circumstances had not changed. Similarly, when it came to enforcing loan repayment, the credit assessment form was used as proof of a farmers' creditworthiness, and thus their moral degeneracy in failing to repay, which in turn provided justification for pressures to repossess collateral as listed on the form.

The importance of the credit assessment form demonstrates that in the Cheetah SII model there is slippage from trustworthiness to creditworthiness in the construction and 'holding together' of the assemblage. This involves a shift from trust between people based on personal relationships, to trust between 'transactors and the transacting network' (Dodd 1994, p.136). This process of distancing and shifts from relationships based on trustworthiness to those based on creditworthiness has been recognised in traditional banking. Interpersonal relationships between local bank managers and clients, for example, are increasingly replaced by virtual relationships through technologies like online banking, and quantification and abstraction through processes like credit scoring (Carrier & Miller 1998). In terms of Cheetah, this 'transacting network', is an assemblage incorporating banks, input providers, the auctioneer, and the market buyer, as well as rotating Cheetah field and office staff. This assemblage is, for the farmers, increasingly faceless or multi-faced, which obscures who can be held accountable and responsive to the farmers' demands and challenges. It also entails a shift in the forms of information that are used to build relationships, from information based on social and physical proximity and shared experiences to the more formalised credit assessment process that organises and standardises the contours of lived experience into a pre-conceived and rigid template.

This distancing in the Cheetah assemblage had important implications for communication and understanding in the context of environmental disruptions in 2015. Cheetah rigidly enforced the repayment of loans in maize, but in Lower Kilolo maize has a complex 'social life' and is far more than simply a cash crop grown for exchange. Maize is enrolled in multiple spheres of value at different times and by different actors. Facing smaller than average maize harvests in 2015, many farmers prioritised other uses for their maize before loan repayment, for example for food, church offerings, and school expenses. This represents a clash over the management of value, and over assumptions of obligations and responsibilities in a time of environmental disruptions.

Farmers responded by pushing back against the imposition of the increasingly faceless, rigid, and prescriptive socio-economic relations imposed by Cheetah in the context of environmental disruptions in 2014–2015. Farmers asserted their own conception of moral economic relations through attempting to negotiate a compromise by asking for loan repayment to be extended to the following harvest season, as is often the case with farmer-to-farmer loans. Although making sense to the farmers, for Cheetah this flexibility was untenable, due to the pressure to collect loan repayment in produce on time that is built into the model, and due to their aim as a social impact investor to render farmers 'creditworthy' and 'bankable'. In response, to get by farmers dissented from the Cheetah model by prioritising other household demands on, and valuations of, their maize harvest before allocating it for loan repayment, resulting in many defaulting on their loans.

9.3. Contributions to a political ecology of agricultural development

Political ecologists have paid little attention to how financial models and motivations travel, become translated in a particular context, and play out in that context. Taking a political ecology approach drawing on assemblage thinking addresses this issue by encouraging a multi-sited and multi-scalar approach that asks 'how' questions, rather than assuming causal connections based on pre-conceived socio-spatial containers. It enables the replacement of 'vaguely defined general entities like 'the market' or 'the state' with concrete assemblages' (De Landa 2006, p.16). This builds on the work of political ecologists who have embraced assemblage thinking (and actor-network theory) to develop novel approaches to ontology and scale (e.g. Goldman et al. 2011; Robbins & Marks 2009; Swyngedouw 1999; Rocheleau 2015). It speaks to Ouma's (2016) call to 'unpack the mechanisms and processes through which capitalist relations are enacted in specific contexts (rather than assuming that they exist *a priori* or that they take some universal, transhistorical shape)'.

By using an assemblage approach I have demonstrated that finance is not an 'up there' neutral asset, and SII is neither a simple conspiracy of investors for further accumulation by dispossession (Peet 2007; McMichael 2005; Stengel 2012; Holt-Gimenez & Altieri 2013), nor a panacea for global development (Clark et al. 2013; Bugg-Levine & Goldstein 2009; Rockefeller Foundation 2012b). SII is an assemblage of actors, institutions, discourses, socio-material entities, and processes: 'there is, from this perspective, no master plan, only assemblages pulled together by one set of social forces, only to fragment and reassemble' (Li 2009, p.80). The SII assemblage is held together by commitments to build more ethical capitalist relations—comprising of fair prices, transparent transactions, reliable material repayment terms, and timely repayment—that provide positive social impacts for smallholder farmers, as well as financial returns for investors.

The ways in which the discursive SII assemblage unfolds in particular contexts are by no means inevitable. I examined how SII travels and is translated into the Tanzanian context by different social impact investors in different ways. I then focused on a key node by which smallholder farmers interact with finance: Cheetah Development. Through its work, Cheetah assembles relationships between disparate actors including Tanzanian smallholder farmers, Tanzanian commercial banks, American and European high net worth individuals, philanthropic foundations, a British corporation and its Tanzanian subsidiary, and pension funds from the US and Europe (see Figure 9.1). These are actors that would otherwise have little reason to come into contact, and the interactions between them cannot easily be understood through a hierarchical conceptual framework starting at the local and moving up through the national to the global. Cheetah works to hold together the SII assemblage through discursive, institutional, and disciplinary power relations, the study of which taps directly into

political ecology's emphasis on marginalisation, access, and control. This thesis is therefore consistent with Robbins & Bishop's (2008) claim that political ecological concerns continue to be relevant in understanding current issues in human-environment relations.

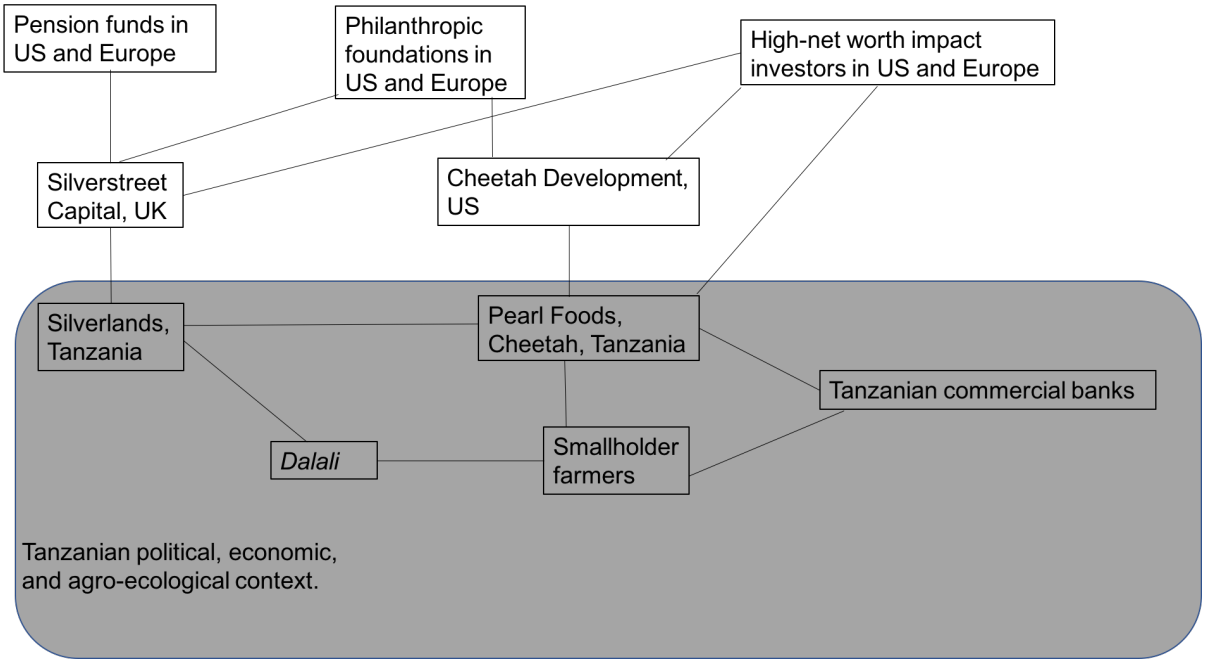

Figure 9.1 Graphical representation of the diverse actors assembled through the node of Cheetah Development in the Tanzanian agricultural sector.

As discussed in Chapter 3, assemblages are productive, emergent, relational, and more or less fragile. As a result, assembled relationships cannot be taken for granted. This encourages the study of how relationships between disparate actors are held together, at least for a time, as well as how they are disrupted and reassembled in different ways. Here, a focus on socio-material entities is useful. Political ecology is fundamentally concerned with human-environment interactions, and taking an assemblage approach adds another dimension through encouraging theorisation of the roles played by socio-material entities in holding disparate actors together (Robbins 2007); rendering them technical and durable over time and space (Li 2007b); and disrupting assembled relations. Examining the work of socio-material entities in assembling and disassembling relationships led me to tease out the role of the credit assessment form in solidifying and rendering durable the 'creditworthiness'—and therefore the 'investability'—of certain smallholder farmers. It also drew my attention to the multiple (and often conflicting) ways in which maize is enrolled into different assemblages by smallholder farmers, and how this clashes with the inflexibility of the valuation of maize by Cheetah. These roles of socio-material entities are discussed further in Section 9.2.4.

Another contribution of this thesis to the literature on agricultural development relates to debates over a new 'agrarian question' regarding the roles of finance and smallholder farmers (building on

McMichael 2013a). In the narrative of the NGR for Africa, a lack of capital and market linkages are presented as major challenges of boosting smallholder agricultural production. The solution proposed through SII is to enrol farmers into financial assemblages to fill the finance resource gap and unlock the entrepreneurial spirit of the 'bottom of the pyramid' (Prahalad & Hart 2008). Despite discursive shifts in how smallholder farmers and the African environment are depicted, as discussed in Chapter 5, the way in which this is playing out through the Cheetah model suggest that SII involves a continued emphasis on the modernisation of smallholder farming in terms of changing behaviours and shifting mindsets. Continuities with the first green revolution of the 1950s–1970s can be identified in the implementation of technical solutions to inherently socio-political and moral economic issues (Edelman 2005; Holt-Gimenez & Altieri 2013). The appreciation of local context in the Cheetah model appears to only go so far, and there is little room for the vagaries of local environmental processes and the fragility of smallholder farmer livelihoods. Ironically, although financial models are often promoted as enabling greater flexibility and freedom of choice, in the case of Cheetah in Lower Kilolo efforts to entrench financial discipline shut down flexible alternative pathways and locally adapted coping mechanisms that characterise the moral economies of smallholder farmers. This challenges the claim that finance can travel everywhere unimpeded: culture and place matter.

The culmination of this analysis is that debates over the role of finance and private capital in smallholder agricultural development need to not only take into account finance as a resource gap to be filled to unlock commercialisation, but also finance as an assemblage of actors held together by moral economic commitments and implemented through power relations. This answers McMichael's (2013a, p.83) call to 'articulate a more complex agrarian question regarding the contemporary crisis of capitalism, and to point to an alternative ontological path'. Ultimately, what may be regarded by some as building 'ethical capitalism' may not be experienced as a positive social impact by another, and can instead have unexpected outcomes and lead to increased hardship. The debate over agricultural development is not just about the role of private capital and how to harness it for positive social impact, but also concerns problematic assumptions and ideals about smallholder farmer livelihoods and moral economies in SSA. Until these problematic assumptions and ideals can be overturned, SII continues to risk similar unexpected and potentially negative outcomes as previous waves of agricultural development.

9.4. Further research

9.4.1. On impact investing

A criticism that has been levelled at both assemblage thinking and political ecology's chain of explanation approach is that they are an 'everything pill', and there is ambiguity and subjectivity over

where to draw research boundaries. In this thesis, I have delineated the SII assemblage by focusing on relationships and interactions between SII organisations, notably Cheetah, and smallholder farmers. Further research could extend the assemblage by investigating how and why the ultimate owners of wealth become involved in SII, for instance the high-net-worth individuals who choose to invest in companies like Cheetah. Key questions surround motivations to invest wealth to achieve a particular social mission, rather than maintaining a divide between charity and investment; expectations of achieving financial and social returns; and how smallholder farmers are translated and re-valued, and communicated as investment opportunities for the wealthy.

I have shown that in the case of Cheetah in Lower Kilolo, SII did not unfold as expected due to clashing perspectives on 'ethical capitalism' between the organisation and farmers. Questions remain as to whether this is a problem faced by SII more generally, or whether it is specific to Cheetah. Future research could take a comparative approach to understand how different organisations translate and adapt SII in the Tanzanian context.

9.4.2. On farmer livelihoods in Lower Kilolo

This thesis only captures a snapshot of life in Lower Kilolo, but it suggests longer-term socio-economic patterns that provide opportunities for further research. Chapter 7 briefly discussed changing social relations of agricultural production over time, for example the waning practice of *mgowe* and the rise of wage labour. While there was not space for a detailed consideration of the causes and implications of this shift, there is scope for further research on how it is affecting moral economic relations between and within households; rural-urban relations and mobility; agricultural production practices; and social differentiation within the village. Analytically, this is important in relation to how smallholder farmer moral economies change over time. It suggests that not only are moral economies geographically and socio-culturally embedded, but they are also not temporally static.

9.4.3. On Cheetah Development

I have focused primarily on the experiences of farmers who are already participating in the Cheetah programme. Questions remain around what factors affect farmer eligibility to participate in the Cheetah programme, why they may choose the Cheetah programme over others that operate in the district, and why some farmers choose not to participate despite being able to meet the eligibility requirements. This speaks to political ecology's focus on social differentiation and marginalisation. It would necessitate a detailed study of wealth, productivity, and asset stratifications between farmers, as well as explorations of psychosocial factors that lead to particular choices and behaviours.

My research was limited by confidentiality issues surrounding official records of defaulting farmers. If it becomes possible to gain access to comprehensive repayment and default data, there is scope to extend this research by examining the particular factors affecting ability to repay or decision to default in 2015. This may serve to inform and improve the eligibility requirements for the Cheetah programme, to ensure that farmers are not faced with the 'impossible choice' between meeting household needs and repaying their loan.

Finally, in this thesis I concentrated on the Cheetah programme in Lower Kilolo District that focused on the commercialisation of maize production. Cheetah runs the same programme in the highland zone of Upper Kilolo, but centred on the commercialisation of potatoes. There is scope, therefore, for a comparison based on crop focus. This would entail studying the spheres of value into which maize and potatoes are enrolled, and whether the 'social life' of potatoes in Upper Kilolo has similar or different implications for the Cheetah programme. Farmers in Upper Kilolo often cultivate potatoes as well as maize, and therefore have two staple crops to fall back on. Potatoes also do not play the same central socio-cultural role in village life as maize for *ugali*. Furthermore, Upper Kilolo is known as an extremely productive area for potato cultivation, and large surpluses have been reported.[355] These factors may lead to very different impacts for the Cheetah programme, for example in the face of environmental disruptions.

9.5. Final thoughts on social impact investing in African agriculture

On multiple occasions this research has challenged my own assumptions, especially about the nature of private sector involvement in African agriculture. Buckets of produce rotting by the side of the road, farmers' frustration with surpluses going to waste, and food insecurity in times of environmental disruptions signal that there are problems with the way producers are currently linked to markets, and farmers are suffering as a result.

There is a role to be played by private capital and financial models in agricultural development, particularly in meeting financing gaps for opportunities that are commercially viable, and for enabling the replication of capital so that it can be reinvested. Additionally, not all social impact investors are how Matt Taibi eloquently described Goldman Sachs: 'a great vampire squid wrapped around the face of humanity, relentlessly jamming its blood funnel into anything that smells like money' (Taibi 2010). More often than not, the social impact investors that I interviewed genuinely believed in the power of

[355] Participant observation, Mwatasi, 23/10/2015.

capital to 'do good', and were working hard to reach their social impact ambitions. Through my research, however, it became clear that good intentions alone are insufficient to actually generate positive social impacts for intended beneficiaries. Furthermore, arguments that there are massive opportunities to make generous financial returns and directly correlated social impacts in African agriculture are exaggerated and misguided, given the current lack of commercially viable pipeline opportunities, and the challenging economic, political, social, and infrastructural environments in many country and sector contexts. The danger of these exaggerated claims is the unwise and rushed committal of capital, with potentially negative impacts for both the investors and the supposed beneficiaries.

The case study of Cheetah Development prompts questions about how agricultural development driven by financial models, motivations, and discipline can be shaped to be sensitive to multiple interests, valuations, and moral-economic relations beyond profit-maximisation. The case study presented here feeds into a long history of agricultural development policies based on externally constructed forms of capitalism that are out of step with the lived experiences of participants and intended beneficiaries. What is considered to be ethical capitalism by impact investors like Cheetah is not necessarily what smallholder farmers consider as constituting locally appropriate, socio-ecologically adapted, and equitable socio-economic relations. This is resulting in the 'foreclosure of the future', to use the words of David Harvey, through indebtedness and missed opportunities.[356]

Rather than presenting the challenge of agricultural development as stemming from an apolitical 'lack of economy' and poverty that is 'in the mind', it is important for impact investors to learn from the lessons of past agricultural development projects, and to question why the smallholder mode of agricultural production—and its accompanying moral economy—has been so persistent over time. In East Africa, droughts will come and there will be years of bad rains. Questions remain, therefore, over whether smallholder agricultural can be rendered 'investable' as currently understood by financial actors. Moreover, further questions can be asked about whether smallholder farming *should* be framed as a 'tremendous business opportunity', based on the implications of being enrolled into global value chains and financial assemblages. The major take-home message, therefore, is the importance of going beyond blaming smallholder farmers for failing to adhere to externally implemented models and visions of moral and ethical socio-economic relations. The key question is why they do what they do in a particular context, and what can be learnt from it.

[356] David Harvey featured lecture: 'Marx, capital and the madness of economic reason', Association of American Geographers Annual Conference, Boston, 4/08/2017.

Appendix

A. Kiswahili glossary

ada	school fees
balozi	leaders
biashara ndogo	small business
bima	insurance
bustani	garden
chakula	food
chotara	hybrid (e.g. seeds)
chumvichumvi	synthetic fertiliser
dalali	middleman, agent, trader
darasa	classroom
debe	20 litre container
dhamana	collateral
dona	wholemeal maize flour
hela	money
gunia	bag, sack
jembe	hoe
kamba	rope
karibu	welcome
kazi	work
kienyeji	traditional (e.g. seeds)
kihenge	large woven baskets (e.g. for storing seeds)
Kilimo Kwanza	agriculture first
kisasa	modern (e.g. seeds)
kuazima	to borrow/to lend
kukopa	to borrow
kukopesha	to lend
kutoa sadaka	to give an offering
kuweka maombi	to place prayers
maandazi	doughnuts
mboga	vegetables
maharage	beans

mahindi	maize
makabila	ethnic groups, tribes
mbegu	seeds
mgowe	communal farming
miradi	projects
mkopo	loan
mzungu	white person/European
ng'ombe	cow
nguvu	strength, vitality
nyama	meat
pombe	local alcohol
sadaka	offering (e.g. to church or mosque)
samadi	manure, organic fertiliser
sembe	refined flour
shamba	farm
pikipiki	motorbike
riba	interest
ugali	food made from maize flour cooked in boiling water or milk
ujamaa	familyhood; adopted as a national strategy by President Nyerere from 1967
vinyunga	valley-bottom cultivation
wakala	agents
wanyonyaji	exploiters

B. List of focus groups

Date	Village	Details
13/08/2015	Viwengi, sub-village of Lundamartwe	6 sub-village leaders
17/08/2015	Ihokelo, sub-village of Lundamartwe	8 farmers (4 men, 4 women). Followed by farm visit
18/08/2015	Mjiwema, sub-village of Lundamartwe	24 farmers (12 women, 12 men)
19/08/2015	Lusaula, sub-village of Lundamartwe	6 farmers (4 men, 2 women). Followed by farm visit.
20/08/2015	Ruaha, sub-village of Lundamartwe	Village walk with 4 farmers (3 male, 1 female)
15/09/2015	Kitelewasi	14 non-participating farmers (7 women, 7 men). Followed by farm visit.
24/09/2015	Kitelewasi	6 Cheetah farmers.
25/09/2015	Kitelewasi	5 farmers
02/10/2015	Vitono	11 Cheetah farmers.
06/10/2015	Vitono	11 non-participating farmers.
10/10/2015	Vitono	7 farmers
26/10/2015	Kipaduka	7 farmers – 3 Cheetah, 4 non-participating.

C. List of farmer interviews

Number	Date	Village	M/F	Location
1	10/09/15	Lusaula	M	Farmer's field
2	10/09/15	Lusaula	M	Farmer's house
3	10/09/15	Lusaula	M	Farmer's house
4	14/09/15	Lusaula	M	Farmer's house
5	14/09/15	Lusaula	M	Under a tree
6	14/09/15	Lusaula	F	Outside the village bar
7	14/09/15	Lusaula	M	By house he was building
8	14/09/15	Lusaula	M	Farmer's house
9	14/09/15	Lusaula	M	Farmer's house
10	14/09/15	Lusaula	F	Path through the village
11	17/09/15	Lusaula	F	Farmer's house
12	17/09/15	Lusaula	M	Farmer's house
13	17/09/15	Lusaula	F	Farmer's house
14	17/09/15	Lusaula	M	Farmer's house
15	17/09/15	Lusaula	M	Outside farmer's house
16	17/09/15	Lusaula	M	Farmer's house
17	17/09/15	Lusaula	M	Farmer's house
18	17/09/15	Lusaula	M	Outside farmer's house
19	17/09/15	Lusaula	M	Farmer's house
20	17/09/15	Lusaula	M	Farmer's field
21	17/09/15	Lusaula	M	Farmer's house
22	21/09/15	Kitelewasi	F	Farmer's house
23	21/09/15	Kitelewasi	F	Farmer's house
24	21/09/15	Kitelewasi	F	Farmer's courtyard
25	21/09/15	Kitelewasi	F	Under a tree
26	21/09/15	Kitelewasi	M	Farmer's house
27	21/09/15	Kitelewasi	M	Outside the village office
28	22/09/15	Kitelewasi	M	Village office
29	22/09/15	Kitelewasi	M	Village office
30	22/09/15	Kitelewasi	M	Village office
31	22/09/15	Kitelewasi	M	Village office
32	22/09/15	Kitelewasi	M	Village office
33	22/09/15	Kitelewasi	M	Village office

34	22/09/15	Kitelewasi	M	Village office
35	22/09/15	Kitelewasi	M	Village office
36	22/09/15	Kitelewasi	M	Village office
37	22/09/15	Kitelewasi	M	Village office
38	22/09/15	Kitelewasi	F	Village office
39	22/09/15	Kitelewasi	M	Village office
40	22/09/15	Kitelewasi	M	Village office
41	22/09/15	Kitelewasi	F	Village office
42	23/09/15	Kitelewasi	M	Outside the village office
43	23/09/15	Kitelewasi	M	Village office
44	23/09/15	Kitelewasi	M	Farmer's house
45	23/09/15	Kitelewasi	M	Outside farmer's house
46	23/09/15	Kitelewasi	M	Outside farmer's house
47	23/09/15	Kitelewasi	M	Farmer's house
48	23/09/15	Kitelewasi	M	Farmer's house
49	23/09/15	Kitelewasi	M	Farmer's house
50	01/10/15	Vitono	M	Farmer's motorbike store room
	25/07/16			Outside farmer's shop
51	01/10/15	Vitono	M	Primary school office
	25/07/16			Village office
52	01/10/15	Vitono	F	Primary school office
	25/07/16			Village office
53	01/10/15	Vitono	M	Farmer's house
54	01/10/15	Vitono	F	Farmer's house
55	01/10/15	Vitono	M	Farmer's house
	21/07/16			Farmer's house
56	01/10/15	Vitono	M	Farmer's shop
57	01/10/15	Vitono	M	Farmer's house
58	01/10/15	Vitono	M	Farmer's house
59	01/10/15	Vitono	M	Farmer's house
	21/07/16			Farmer's house
60	06/10/15	Vitono	M	Village meeting space
61	06/10/15	Vitono	M	Village meeting space
62	06/10/15	Vitono	M	Village meeting space
63	06/10/15	Vitono	M	Village meeting space
64	06/10/15	Vitono	M	Village meeting space

65	06/10/15	Vitono	M	Village meeting space
66	06/10/15	Vitono	M	Village meeting space
67	06/10/15	Vitono	F	Village meeting space
68	06/10/15	Vitono	F	Village meeting space
	21/07/16			Farmer's house
69	06/10/15	Vitono	M	Village meeting space
70	08/10/15	Vitono	F	Outside farmer's house
71	08/10/15	Vitono	F	Farmer's courtyard
72	08/10/15	Vitono	M	Farmer's house
	25/07/16			Village office
73	08/10/15	Vitono	M	Farmer's house
74	08/10/15	Vitono	M	Farmer's house
75	08/10/15	Vitono	M	Farmer's house
76	08/10/15	Vitono	F	Farmer's house
	21/07/16			Farmer's house
77	08/10/15	Vitono	F	Farmers house
78	09/10/15	Vitono	F	Farmer's house
79	09/10/15	Vitono	M	Outside village bar
80	09/10/15	Vitono	F	Farmer's house
	21/07/16			Farmer's house
81	09/10/15	Vitono	F	Outside farmer's shop
	08/08/16			Outside farmer's shop
82	09/10/15	Vitono	M	Farmer's house
83	09/10/15	Vitono	M	Farmer's house
84	09/10/15	Vitono	M	Farmer's house
85	19/10/15	Kipaduka	M	Farmer's house
86	19/10/15	Kipaduka	M	Farmer's house
	25/07/16			Farmer's house
87	19/10/15	Kipaduka	M	Farmer's house
	16/08/16			
88	19/10/15	Kipaduka	M	Farmer's house
89	19/10/15	Kipaduka	M	Farmer's house
	15/08/16			Farmer's house
90	19/10/15	Kipaduka	F	Farmer's field
	15/08/16			Farmer's house
91	19/10/15	Kipaduka	M	Under a tree

92	19/10/15	Kipaduka	M	Farmer's house
	15/08/16			Farmer's house
93	20/10/15	Kipaduka	F	Under a tree
94	20/10/15	Kipaduka	M	Farmer's house
95	20/10/15	Kipaduka	M	Famer's house
96	20/10/15	Kipaduka	M	Outside the house
97	20/10/15	Kipaduka	M	Under a tree
98	20/10/15	Kipaduka	F	Under a tree
99	20/10/15	Kipaduka	M	Farmer's house
	15/08/16			Outside farmer's house
100	21/10/15	Kipaduka	M	Outside the village bar
101	21/10/15	Kipaduka	M	Outside the village bar
102	21/10/15	Kipaduka	F	Farmer's house
103	21/10/15	Kipaduka	M	Farmer's house
	15/08/16			Outside church
104	21/10/15	Kipaduka	F	In the courtyard
	15/08/16			Farmer's house
105	21/10/15	Kipaduka	F	Outside farmers' house
	16/08/16			Outside farmers' house
106	21/10/15	Kipaduka	F	Farmer's vegetable store
107	21/10/15	Kipaduka	F	Farmer's house
109	21/07/16	Vitono	M	Farmer's house
110	08/08/16	Vitono	M	Farmer's house
111	08/08/16	Vitono	M	Outside village shop
112	08/08/16	Vitono	M	Farmer's house
113	08/08/16	Vitono	M	Outside farmer's house
114	08/08/16	Vitono	M	In the car
115	08/08/16	Vitono	F	Farmer's house
116	08/08/16	Vitono	M	Farmer's house

Village *Mwenyekiti/Balozi* (chairman/leader) interviews:

Date	Village
08/09/2015	Lusaula
28/09/2015	Kitelewasi
07/10/2015	Vitono
16/10/2015	Kipaduka
16/07/2016	Vitono

Religious representative interviews:

Date	Place	Details
19/07/2015	Vitono	Catholic
19/07/2016	Vitono	Lutheran
19/07/2016	Vitono	Assemblies of God
19/07/2016	Vitono	Shafi'i Islam

D. Participatory methods

Date	Village	Method
25/07/2016	Vitono	Wealth ranking
02/08/2016	Vitono	Village mapping

E. Stakeholder interviews

Name	Organisation and role	Date	Location
Emma Impink	Program Manager, One Acre Fund	10/09/2015	Neema Crafts, Iringa, Tanzania
Marco Johnson	Vice-President Field Operations and President Pearl Foods, Cheetah Development	12/09/2015 18/09/2015 25/09/2015	Greek Club, Iringa, Tanzania
Sarah Toupal	Program Manager, One Acre Fund	30/09/2015	One Acre Fund Office, Iringa, Tanzania
Anonymous	Regional manager, PRIDE Tanzania	05/10/2015	PRIDE Iringa Office, Tanzania
Katrina Sill	Program Associate, Product Innovations, One Acre Fund	15/10/2015	Greek Club, Iringa, Tanzania
Edwin Post	Program Development, Cheetah Development	21/10/2015	Cheetah Development Office, Iringa, Tanzania
Eliza Post	Field team leader, Cheetah Development	27/10/2015	Cheetah Development Office, Iringa, Tanzania
Janet Sanders and Sean Johnson	Compliance Director and Commercial Manager, Silverlands	29/10/2015	The Haven, Iringa, Tanzania
Dr Anand Moro	General Manager, Sembe Tofauti	05/11/2015	Sembe Tofauti, Tanzania
Edward Agaba	Team Leader, Inclusive Green Growth of Smallholder Agriculture Program, AGRA	21/11/2015	Phone
Otto Ulyate	Farm Manager, Rutuba Farm	01/12/2015 26/07/2016	Rutuba Farm, Tanzania
Janet Sanders	Compliance Manager, Silverlands	03/12/2015	Silverlands Farm, Tanzania
Marietta Fokas	Owner/manager, Greek Club	10/12/2015	Greek Club, Iringa, Tanzania
Michael Dean	Co-founder, AgFunder	29/03/2016	Agfunder, San Francisco
Ashkan Rahmati	Investment Executive, Private Equity Team, CDC Group	04/05/2016	The CDC Group office, London
Gary Vaughan-Smith	Chief Investment Officer, SilverStreet Capital	13/05/2016 28/09/2016	SilverStreet Capital Office, London

			Kisolanza Farm, Iringa, Tanzania.
Ray Menard	Chief Executive Officer and Founder, Cheetah Development	17/05/2016	Skype
Ponmile Osibo	Manager Research and Training, AVCA	18/05/2016	Phone
Richard Phillips	Owner/manager, Kibebe Farm	04/08/2016	Kibebe Farm, Iringa
Joy Hazucha	Senior Vice-President People, Culture, and Growth, Cheetah Development	08/08/2016	Cheetah Development Office, Iringa
Andrea Mwinuka	Regional Manager, BRAC Tanzania	10/08/2016	BRAC Iringa Office, Tanzania
Ferdinand Mgaya	Ihemi Cluster Coordinator, SAGCOT Centre	19/08/2016	Gentle Hills, Iringa, Tanzania
Gerald Chuwa	VICOBA Manager, Ilula Orphan Project	19/08/2016	IOP Office, Ilula, Tanzania
Carina Barth	Agri-Practices Development Advisor, NAFAKA-USAID	22/08/2016	Hasty Tasty, Iringa, Tanzania
Roda Hassan	Branch Manager, BRAC Tanzania Finance Ltd	25/08/2016	BRAC Ruaha Office, Tanzania
Brad Brown	Senior Vice-President Impact Investment and Philanthropy, Cheetah Development	07/10/2016	Skype
David Kelly	Managing Partner, H2O Venture Partners	15/02/2017	Skype
Phil DeMuth	Managing Director, Conservative Wealth Management LLC	21/02/2017	Skype
Robert Jenkins	Director, African Agricultural Investments	27/02/2017	Skype

F. Participant observation

Date	Location	Details
23/10/2015	Mwatasi	Shadowed Cheetah Development field staff and the auctioneer for a village meeting and loan repayment collection in a village in Upper Kilolo.
27/10/2015	Irole, Vitono	Shadowed Cheetah Development field staff for a village meeting in one village and loan repayment collection in another, both in Lower Kilolo.
31/10/2015	Kipaduka, Itungi	Shadowed Cheetah Development field staff during maize loan repayment collection, credit assessment, and village meetings in three villages in Kilolo District: one in Lower Kilolo and one in Upper Kilolo.
4/11/2015	Kipaduka	Observed One Acre Fund field staff distributing inputs to participating farmers.
09/11/2015-13/11/2015	Njombe	Shadowed Cheetah field staff to Njombe where they were exploring options for expansion. Met with the Regional Commissioner, Syngenta and Yara field officers, and a MVIWATA representative. Visited three villages and observed the Cheetah team explaining the programme the farmers.
03/12/2015	Lusaula	Participated in planting of popcorn maize.

G. Sample consent form

I, ……, consent to participate in an interview on …… conducted by Natasha Watts from the Geography Department of Cambridge University. This interview is part of her PhD research provisionally titled 'Investing for Impact: Finance and Farming in the Southern Highlands of Tanzania'. The expected completion date for this research is October 2017.

I consent to being quoted by name in this research. _____

OR

I consent to being quoted as 'a representative from *…….. organisation*'. _____

I consent to content relating to this interview being published without being contacted. _____

OR

I ask to be contacted before content relating to this interview is published. _____

Signature of participant:

Signature of researcher:

H. Sample farmer focus group topic guide

NB the topic guide was tailored depending on its composition. This is a sample of topics that were drawn on.

- Discussion of crop mix.
- Calendar of maize cultivation practices throughout the year.
- Discussion of how multiple uses of maize and how they are prioritised.
- Challenges farmers face and how they think they can be overcome.
- Perceptions and experiences of loans and conditions on loans.
- Perceptions of agricultural development organisations e.g. Cheetah.
- Reasons for participation/non-participation in the Cheetah programmes.
- Experiences of participation in agricultural development programmes.
- Activities conducted by Cheetah over the year.
- Discussion of benefits and challenges posed by Cheetah membership, and what could be done better or differently.

I. Sample farmer interview topic guide (translated from Kiswahili)

NB this is not an exhaustive list as discussion was led by participants, but it demonstrations a selection of the core questions asked.

1. Male/female
2. How old are you?
3. Which ethnic group do you belong to?
4. What education level have you reached: none, Standard 7 (primary), Form 4 (secondary, higher?
5. How many people live in your house with you?
6. Are there any members of your household not currently living in your house?
7. If you have children, are you able to send them to school?
8. Do you follow a religion? Which one?
9. Were you born in this village? If no, where were you born?
10. Do you do other work or small business other than farming?
11. What is the size of your farm?
12. How much of that land do you own, and how much do you rent?
13. Do you have private land title?
14. How far away is your farm from your house?
15. How much of that land have you cultivated in the last year?
16. How do you farm?
    a. *Jembe*, own cow, rented cow, own tractor, rented tractor?
17. Do you hire people to work on your farm for money?
18. Do you work on the farms of other people for money?
19. Do you participate in *mgowe*?
20. Do you use fertiliser? *Samadi* or *chumvichumvi* or both? Why? Where from?
21. Do you irrigate your farm?
22. What crops have you cultivated in the past year?
23. What vegetables and fruits have you cultivated in the past year?
24. Is this different to previous years? Why?
25. In the past year did you sell any fruits, crops or vegetables?
26. Which crop, fruit, or vegetable have the greatest impact on your income? Why?
27. Do you discuss decision about farming with anyone else?
28. For maize, do you plant *kienyeji* or *kisasa* seeds, or both? Why?
    a. How much maize did you plant in the last year, in acres and in quantity of seed?

b. Where did you obtain the maize seeds?
c. How much maize did you harvest in the last harvest season?
d. How does this compare to previous years? Why?
e. After the harvest how do you store your maize?
f. What do you use your maize for? How do you prioritise these uses?
g. In the last harvest season did you sell any maize? Why? How does this compare to previous years?

29. How many *debe* of maize do you need to cover household needs for a year?
30. In the past month have you gone a day without food?
31. Last year did you harvest enough to feed your family for the year?
    a. Do you usually harvest enough to feed your family for a year?
32. What are the major challenges facing farmers in the village?
    a. How do you think these challenges can be overcome?
33. In the past year have you lent money to other people in the village?
    a. Do you ever lend money to other people in the village?
    b. Why? Can you give an example?
    c. Were there any conditions on those loans? E.g. interest, repayment timeframes
34. In the past year have you borrowed money from other people in the village?
    a. Have you ever borrowed money from other people in the village?
    b. Why? Can you give an example?
    c. Were there any conditions on those loans? E.g. interest, repayment timeframes
35. How do you feel about interest on loans?
36. How do you feel about collateral on loans?
37. What happens if someone cannot repay a loan to someone else in the village?
    a. For example if they are ill?
    b. For example if there is bad weather?
    c. Do people help each other to repay loans?
38. Do you participate in the Cheetah Development programme?
    a. When did you join?
    b. Why did you join?
    c. What did you expect to gain from joining?
    d. What was your experience in the first year?
    e. What was your experience in following years?
    f. Have you ever had problems repaying your loan to Cheetah?
        i. Why? What happened?
    g. Why do you think some farmers were able to repay their loans to Cheetah and others defaulted?

h. What do you think is good about the Cheetah programme?

i. What could Cheetah do better or differently?

39. Do you participate in any other programmes?

    a. How do these compare to Cheetah?

J. Sample agricultural development organisation interview topic guide

NB questions were tailored to the interviewee and the organisation. This is not an exhaustive list.

1. What is the history of your organisation?
2. What is your role within the organisation?
3. Please can you explain your organisation's model and the rational behind it?
4. How are villages selected to participate in the programme?
5. Within villages, how are farmers recruited?
6. What are the eligibility requirements for farmer participation?
7. What processes occur throughout the year?
8. What challenges does the organisation face?
9. What happens if a farmer defaults on their loan repayment?
10. Why do you think some farmers default on their loan repayment?
11. Are these challenges specific to working in rural Tanzania?
12. What other actors do the organisation link farmers to?
13. How does this organisation compare with others operating in Iringa?
14. What are the long-term goals of the organisation?

K. Sample social impact investor interview topic guide

NB questions were tailored to the interviewee and the organisation. This is not an exhaustive list.

1. How do you define 'social impact investing'?
2. Who are the social impact investors?
3. How did you become involved in social impact investing and why?
4. Why do you think social impact investing is proliferating now? What are the drivers?
5. What role do you think the financial crisis played in the proliferation of social impact investing?
6. Why do you think social impact investors are looking to African agriculture?
7. Within Africa how does your organisation choose investment locations and projects?
8. Do you think there is the opportunity to make directly correlated social and financial returns from investing in African agriculture? How?
9. What do you think are the challenges for impact investing in African agriculture?
    a. How can these challenges be overcome?
10. Does your organisation measure 'social impact'? How? Why/why not?

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